PERFORM IMMUNOLOGICAL TECHNIQUES

UNIT CODE: APB/OS/AB/CR/10/6/A

UNIT DESCRIPTION

This unit specifies the competencies required to perform immunological techniques. It involves demonstrating immunological tissues and cells and determining immunological reactions. It also involves carrying out immunodiagnostic methods and applying immunization procedures.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the **key outcomes** which make up workplace function (to be stated in active)	**PERFORMANCE CRITERIA** These are **assessable statements** which specify the required level of performance for each of the elements (to be stated in passive voice) ***Bold and italicized terms are elaborated in the Range***
1 Demonstrate immunological tissues and cells	1.1 ***Immune cells and tissues*** are observed under the microscope as per laboratory procedures 1.2 Immune cells and tissues are identified as per laboratory procedure
2 Determine immunological reactions	2.1 ***Immunoglobulins are classified*** as per laboratory procedures. 2.2 Serial dilution is carried out as per laboratory procedures 2.3 Compliment fixation test is carried out as per immunological procedures 2.4 Hypersensitivity reactions are identified and demonstrated as per immunological procedures
3 Carry out immunodiagnostic methods	*3.1* ***Immunodiagnostic techniques*** are carried out as per immunological procedures. *3.2* ***Immune disorders*** are identified as per immunological procedures.
4 Apply immunization procedures	4.1 ***Vaccine types*** are identified as per WHO guidelines. 4.2 Immunization schedules are demonstrated as per WHO guidelines

RANGE

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

VARIABLE	RANGE
Immune cells and tissues include but are not limited to:	• Lymphoid tissues • Thymus • Spleen • Bone marrow • Lymph nodes
Immunoglobulins are classified include but are not limited to:	• Ig M • Ig G • Ig D • Ig A • Ig E
Immunodiagnostic techniques include but are not limited to:	• Agglutination • Precipitation • Immunodiffusion • Cell diffusion • Immune electrophoresis • Complement fixation test
Immune disorders include but are not limited to:	• Auto immune • Hypersensitivity • Immunosuppression
Vaccine types include but are not limited to:	• Live attenuated • Inactivated • Subunit • Toxoid • Conjugate • Recombinant vector • DNA

REQUIRED SKILLS AND KNOWLEDGE

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

Required Skills

The individual needs to demonstrate the following skill

- Communication
- Interpersonal
- Analytical

- Critical thinking
- Problem solving
- Innovation
- Creativity
- Observation

Required Knowledge

The individual needs to demonstrate knowledge of:

- Microscopy
- Cytological techniques
- Histological techniques
- Specimen collection methods
- Storage of specimens
- Immune cells & tissues
- Antigen-antibody reactions
- Immunodiagnostic techniques
- Vaccines

EVIDENCE GUIDE

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

1 Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Observed and identified immune cells and tissues 1.2 Classified immunoglobulins 1.3 Carried out serial dilution 1.4 Carried out compliment fixation test 1.5 Identified and demonstrated hypersensitivity reactions 1.6 Carried out immunodiagnostic techniques 1.7 Identified immune disorders 1.8 Identified vaccine types 1.9 Demonstrated immunization schedules
2 Resource Implications	The following resources should be provided: 2.1 Well-equipped biology laboratory 2.2 Science laboratory procedures manual

		2.3 Laboratory reagents and chemicals 2.4 PPEs
3	Methods of Assessment	Competency in this unit may be assessed through: 3.1 Oral 3.2 Written 3.3 Observation 3.4 Third party 3.5 Practical test
4	Context of Assessment	Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.
5	Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.