

Specification of Competency Standards
for the Testing, Inspection and Certification Industry
Unit of Competency

Functional Area - Testing Operations

Title	Perform staining techniques
Code	105805L4
Range	This unit of competency (UoC) covers the abilities to select and apply appropriate staining technique on a specimen for microscopic examination in testing laboratories.
Level	4
Credit	2 (For Reference Only)
Competency	<p>Performance Requirements</p> <ol style="list-style-type: none"> 1. Possess theory of cell biology and knowledge of the purpose and mechanisms of staining <ul style="list-style-type: none"> • Describe the structure, function and biochemical properties of prokaryotic and eukaryotic cells and various organelles in cells. • Demonstrate basic cell biology laboratory techniques such as sectioning and fixing of specimen. • Identify cell staining techniques and mechanisms. • Differentiate the chemical natures and uses of staining dyes. 2. Select and apply staining techniques on the specimen <ul style="list-style-type: none"> • Determine the sample nature and test requirements to select appropriate staining technique for the specimen. • Undertake appropriate techniques for sample preparation and staining in accordance with standard operating procedures / protocols, e.g. sectioning, smearing, labelling, mounting / fixing. • Adjust staining parameters for optimum resolution of stained specimen, e.g.: <ul style="list-style-type: none"> ○ concentration of the dyes, ○ duration of staining and/or washing steps. 3. Exhibit professionalism <ul style="list-style-type: none"> • Ensure the staining procedures are carried out independently and safely by observing the laboratory safety rules and precautions.
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> • select and apply appropriate staining technique according to the sample nature and test requirements, • undertake procedural staining on prepared specimen safely and independently by adjusting staining parameters for optimum resolution of specimen.
Remark	