

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

Functional Area - Testing Operations

Title	Prepare biological samples
Code	105806L3
Range	This unit of competency (UoC) covers the abilities to apply suitable techniques and equipment to prepare, separate and collect biological samples for biological tests in testing laboratories.
Level	3
Credit	2 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Possess knowledge of biological sample preparation techniques</p> <ul style="list-style-type: none"> • Describe the working principles of biological sample preparation procedures, e.g.: <ul style="list-style-type: none"> ○ extraction, ○ separation, ○ precipitation, ○ concentration. • Apply storage, transferring and handling techniques on biological samples to achieve sample integrity, e.g. freezing/thawing, quenching. <p>2. Prepare adequate amount of the desired cell/organelle/bio-molecule for further biological tests</p> <ul style="list-style-type: none"> • Apply appropriate techniques for biological sample preparation , e.g.: <ul style="list-style-type: none"> ○ lipid / protein extraction, ○ DNA purification. • Prepare suitable reagents and operate suitable equipment for biological sample preparation, e.g.: <ul style="list-style-type: none"> ○ centrifuge, ○ buffer solutions and solvents. • Collect, store and handle the prepared biological sample according to established procedures to prevent sample contamination and maintain sample integrity. <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> • Ensure the quantity and purity of the prepared biological sample for further laboratory tests.
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> • apply appropriate techniques for biological sample preparation, • use suitable reagents and equipment to prepare sufficient quantity of sample for biological tests, • maintain the integrity and purity of biological sample by using suitable means of laboratory practices.
Remark	