

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

Functional Area - Testing Operations

Title	Apply sample treatment techniques to chemical testing
Code	105794L3
Range	This unit of competency (UoC) covers the abilities to apply suitable treatment techniques to prepare the samples ready and fit for chemical testing in testing laboratories.
Level	3
Credit	2 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Possess knowledge of sample treatment techniques</p> <ul style="list-style-type: none"> • Apply the theory and working principles of common sample treatment procedures / techniques, e.g.: <ul style="list-style-type: none"> ○ concentration / dilution, ○ stabilisation / activation, ○ purification and separation, ○ digestion, ○ purge and trap. • Differentiate sample treatment methods for inorganic and organic determinants. • Specify the use of laboratory apparatus / equipment / reagents for the respective sample treatment according to different characteristics of samples, e.g.: <ul style="list-style-type: none"> ○ volumetric glassware, ○ chemical agents, ○ spinning machine / centrifugation, ○ purge and trap concentrator, ○ enzymes. • Identify the advantages and disadvantages of various sample treatment methods for a range of testing situations. <p>2. Apply suitable treatment techniques on samples in accordance with test requirements</p> <ul style="list-style-type: none"> • Identify sample characteristics that may affect selection and application of sample treatment methods and conditions. • Apply suitable techniques and/or equipment for sample treatment and preparation according to test requirements. • Confirm the treated sample is ready and fit for further chemical testing by using appropriate standards or reference materials as validation checks for the treated sample. <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> • Ensure a representative analytical portion of the laboratory sample can be obtained for both quantitative and/or qualitative purpose
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> • apply suitable treatment techniques to obtain a representative portion of sample for quantitative and/or qualitative chemical testing according to test requirements and standard operating procedures, • confirm the readiness of treated sample against appropriate standards or reference materials.
Remark	