

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

Functional Area - Testing Operations

Title	Verify and maintain reference and working cultures
Code	105891L4
Range	This unit of competency (UoC) covers the abilities to verify reference and working cultures, specify the criteria of acceptance and storage conditions, and maintain reference and working cultures in a testing laboratory.
Level	4
Credit	2 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Possess the knowledge of verification procedures and maintenance techniques for reference and working cultures</p> <ul style="list-style-type: none"> • Identify reference cultures of microorganisms not obtained directly from a national collection. • Describe the characteristics of the strains of reference and working cultures to be verified. • Describe various verification techniques for reference and working cultures, e.g.: <ul style="list-style-type: none"> ○ serological tests, ○ biochemical tests, ○ morphological examination. • Select appropriate reference cultures that are traceable to a national culture collection. <p>2. Verify and maintain reference and working cultures</p> <ul style="list-style-type: none"> • Apply appropriate verification technique according to the characteristics of the strains of reference cultures and the number of sub-culturing passages. • Perform the verification in accordance with the established procedures. • Determine the acceptance criteria of the cultures / sub-cultures for use as reference stocks and working stocks for routine operation in the laboratory. • Record the characteristics of reference and working cultures and compare against the determined acceptance criteria, e.g. microorganisms in reference cultures. • Count the number of passages that a culture stock has gone through. • Label the verified reference and working cultures and sub-cultures indicating the verification date and next verification date. • Maintain desired characteristics of the strains of reference and working cultures by using appropriate storage environment and preservation technique such as freeze-drying, liquid nitrogen storage, beads. <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> • Maintain verification records of reference and working cultures and sub-cultures that meet the requirements of intended application. • Ensure reference and working cultures and sub-cultures are verified and maintained properly to avoid any loss of viability, changes of biochemical activity and/or change in morphology.
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> • apply appropriate verification technique and procedure to verify reference and working cultures within the determined acceptance criteria, • maintain desired characteristics of the strains of reference and working cultures by applying appropriate storage environment and preservation technique.
Remark	