

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

Functional Area - Testing Operations

Title	Formulate verification programme for reference and working cultures and sub-cultures
Code	105883L5
Range	This unit of competency (UoC) covers the abilities to formulate a planned programme for verification of reference and working cultures and sub-cultures of microorganisms used in a microbiological testing laboratory.
Level	5
Credit	2 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Possess knowledge of reference and working cultures and sub-cultures of microorganisms and their verification techniques</p> <ul style="list-style-type: none"> <li>• Explain the importance of using reference and working cultures for traceability purpose in a testing laboratory.</li> <li>• Identify recognised national collection of reference cultures, e.g.: <ul style="list-style-type: none"> <li>○ American Type Culture Collection (ATCC),</li> <li>○ Type Culture Collection of Chinese Academy of Sciences (CGMCC),</li> <li>○ National Collection of Type Cultures (NCTC),</li> <li>○ European Collection of Animal Cell Cultures (ECACC).</li> </ul> </li> <li>• Explain various verification techniques for desired characteristics of the strains in reference and working cultures, e.g.: <ul style="list-style-type: none"> <li>○ serological tests,</li> <li>○ biochemical tests,</li> <li>○ morphological examination.</li> </ul> </li> </ul> <p>2. Formulate verification programme for reference and working cultures and sub-cultures</p> <ul style="list-style-type: none"> <li>• Critically evaluate the scope and requirements of the verification programme for reference and working cultures and sub-cultures.</li> <li>• Determine reference cultures of microorganisms claimed to be traceable to a national collection.</li> <li>• Identify reference stocks and working stocks of cultures to be verified.</li> <li>• Prepare the inventory list and history of sub-culture from reference cultures.</li> <li>• Develop detailed verification programme including verification schedules, verification procedures, interpreting verification data.</li> <li>• Determine the number of passages for which the purchased reference culture can be sub-cultured and the validity period of culture stocks.</li> <li>• Allocate roles and responsibilities of laboratory personnel.</li> <li>• Establish the re-verification interval for reference and working cultures.</li> </ul> <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> <li>• Ensure the verification programmes of reference and working cultures and sub-cultures are implemented and monitored effectively.</li> </ul>
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> <li>• formulate verification programme for reference and working cultures and sub-cultures by critically evaluating the scope and requirements,</li> <li>• establish procedures to implement verification programme of reference and working cultures and sub-cultures in the microbiology testing laboratory.</li> </ul>
Remark	