

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

Functional Area - Testing Operations

Title	Formulate quality control protocol for monitoring the validity of tests
Code	105874L5
Range	This unit of competency (UoC) covers the abilities to critically review the operation of the laboratory and formulate the quality control protocol for monitoring the reliability and validity of test results in the testing laboratory.
Level	5
Credit	4 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Possess knowledge of techniques and procedures for quality control of test results</p> <ul style="list-style-type: none"> <li>• Interpret the requirements of assuring the quality of test results in relevant international standard.</li> <li>• Explain the meaning of reliability and validity of test.</li> <li>• Command statistical techniques or trend analysis for reviewing the quality control data.</li> <li>• Critically review the operation of the laboratory and select monitoring methods appropriate for the type and volume of the work undertaken.</li> </ul> <p>2. Formulate quality control protocol for monitoring the validity of tests</p> <ul style="list-style-type: none"> <li>• Establish the policy and procedures for monitoring the validity of tests undertaken and implementing the quality control protocol.</li> <li>• Designate the responsibilities and authorities for monitoring the validity of tests undertaken.</li> <li>• Incorporate the requirements for assuring the quality of test results in the quality control protocol.</li> <li>• Plan and review the monitoring protocol including, but not limited to, the following: <ul style="list-style-type: none"> <li>○ regular use of certified reference materials and/or internal quality control using secondary reference materials,</li> <li>○ participation in interlaboratory comparison or proficiency-testing programmes,</li> <li>○ replicate tests using the same or different methods,</li> <li>○ retesting of retained items,</li> <li>○ correlation of results for different characteristics of an item.</li> </ul> </li> <li>• Establish criteria for determining the validity of a test.</li> <li>• Suggest statistical techniques to review and evaluate the results obtained from a particular test.</li> <li>• Plan and recommend appropriate actions for handling incorrect results.</li> <li>• Conduct continual assessment on the defined criteria and adjust the criteria to suit the laboratory conditions.</li> </ul> <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> <li>• Ensure the defined criteria laid down in the quality control protocol are implemented and monitored effectively for continuous improvement.</li> </ul>
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> <li>• critically review the operation of the laboratory and formulate the quality control protocol for monitoring the validity of tests,</li> <li>• define criteria for evaluating the validity of test results and make recommendations based on incorrect results reported,</li> <li>• establish procedures to implement the quality control protocol in the laboratory.</li> </ul>
Remark	The relevant international standard involved in this UoC is as follows:

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	<ul style="list-style-type: none"><li>• ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories</li></ul>
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