

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

Functional Area - Testing Operations

Title	Evaluate calibration results of equipment and reference standards
Code	105887L5
Range	This unit of competency (UoC) covers the abilities to critically evaluate calibration results of equipment and/or reference standards to justify whether the equipment and/or reference standards are fit for the intended use in the laboratory.
Level	5
Credit	2 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Possess knowledge of intended use of equipment and reference standards and requirements of calibration certificates</p> <ul style="list-style-type: none"> • Determine the intended use of equipment and reference standards in the laboratory. • Establish acceptance criteria for the performance of equipment and reference standards after calibration. • Interpret the compliance requirements of calibration certificates in relevant international standards. • Comprehend the principle and mathematical concepts for evaluation of uncertainty for the calibration. <p>2. Evaluate calibration results of equipment and reference standards</p> <ul style="list-style-type: none"> • Critically evaluate calibration certificates by interpreting: <ul style="list-style-type: none"> ○ calibration results with units of measurement where appropriate, ○ calibration methods used, ○ conditions (e.g. environmental) under which the calibrations are made that have an influence on the measurement results, ○ uncertainty of measurement and/or a statement of compliance with an identified metrological specification or clauses, ○ evidence that the measurements are traceable. • Justify the suitability of equipment for intended use based on the interpretation of calibration results against established acceptance criteria and its tendency of performance. • Formulate measures in case calibration exceeds the specified tolerance. • Comprehend and document necessary information in the calibration certificates or results. <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> • Ensure the calibration certificate complies with requirements of relevant international standards. • Ensure the necessary information in the calibration certificates or results is updated and the personnel in use of the equipment / reference standards are aware of the information.
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> • critically evaluate calibration results and justify the suitability of equipment and reference standards for intended use, • comprehend and apply necessary information in the calibration certificates or results.
Remark	<p>The relevant international standards involved in this UoC are as follows:</p> <ul style="list-style-type: none"> • ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories

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	<ul style="list-style-type: none">• ISO Guide 31 Reference Materials – Contents of Certificates and Labels• ISO Guide 32 Calibration in Analytical Chemistry and Use of Certified Reference Materials
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