



Australian Government

MSL935007 Monitor the quality of test results and data

Release: 1

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Modification History

Release	Comments
Release 1	This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>. Supersedes and equivalent to MSL935001 Monitor the quality of test results and data. Foundation skills information added. Range of conditions removed. Assessment requirements amended.

Application

This unit of competency describes the skills and knowledge to analyse a series of test results and data to detect potential or actual non-conformances, assess their significance and recommend preventative or corrective actions. The unit assumes personnel will have access to workplace quality assurance procedures based on Australian and/or international standards. This unit of competency does not cover the adaptation or development of test methods or procedures.

This unit of competency applies to technical officers, technical specialists and laboratory supervisors in all industry sectors.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

MSL924003 Process and interpret data

Competency Field

Quality

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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1	Verify accuracy of data and technical records	1.1	Retrieve and collate all relevant data files and technical records for the specified time interval, tests or product range or project
		1.2	Inspect data records to check the integrity of data entry, alterations, transfers and calculations
		1.3	Confirm that technical records contain sufficient information to provide an audit trail for the tests involved
2	Assess the quality of data/results	2.1	Use charts and tables to determine whether data/results are within specified limits
		2.2	Analyse data trends and results for blanks, duplicates and/or check samples to detect systematic uncertainties
		2.3	Use statistical tests and workplace procedures to check data acceptability
		2.4	Check that estimations of uncertainties are reasonable and consistent with test method, client or product specification requirements
		2.5	Identify results that cannot be reconciled with technical records and/or expected outcomes
3	Identify potential causes for unacceptable results	3.1	Review user checks and calibration performance records to confirm that equipment or instrument meets test specifications
		3.2	Check for obvious sources of interferences that may have occurred during measurements
		3.3	Review technical records to identify human or environmental factors that could affect reliability of results
		3.4	Review records of sample collection and preparation to confirm chain of custody requirements and adherence to sampling procedures

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	3.5	Check that any documented deviations from sampling procedures and/or test methods were technically justified and authorised
	3.6	Check the condition of sampling equipment and/or stored samples if available/appropriate
4 Report findings to relevant personnel	4.1	Summarise the quality of test results and data
	4.2	Document potential sources or instances of non-conforming work and assess their significance
	4.3	Recommend appropriate preventative/corrective actions to improve sampling, testing and/or calibration activities
	4.4	Prepare reports in a format and style consistent with their intended use and workplace guidelines

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

- Numeracy skills to apply statistical tests to estimate uncertainties and determine data acceptability.
- Problem-solving skills, such as root cause analysis, to identify and rectify deviations in results.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Equivalent to MSL935001 Monitor the quality of test results and data, Release 1.

Links

MSL Laboratory Operations Companion Volume Implementation Guide is available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

Assessment Requirements for MSL935007 Monitor the quality of test results and data

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- analysed at least 2 sets of test results and data to detect potential or actual non-conformances, assessed their significance, identified potential causes and recommended preventative or corrective actions
- reviewed the accuracy and completeness of at least 1 set of technical records for sampling or testing activities
- reviewed the accuracy and completeness of at least 1 set of instrument calibration/performance records.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- characteristic properties of the materials under investigation
- specifications for samples, tests and/or calibration activities under investigation
- scientific and technical knowledge of the procedures, equipment, materials and instrumentation used to generate the test results and data
- charts, tables and statistical analysis tools to interpret results, estimate uncertainties and determine data acceptability
- sources of interference that may affect data
- human and environmental factors that may affect data
- workplace data quality procedures and/or legal traceability requirements
- instrument calibration/performance records
- typical sample collection and preparation problems and associated preventative/corrective actions

- National Association of Testing Authorities (NATA) accreditation program requirements
- legal, ethical and work health and safety (WHS) requirements specific to the work task.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - workplace quality assurance procedures based on Australian and/or international standards, and workplace quality manuals and procedures
 - technical records of sampling and testing activities, and instrument calibration/performance records
 - appropriate software
 - samples, sampling and testing equipment, instruments and materials.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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