



Australian Government

MSL974020 Perform food tests

Release: 1

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Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL974004 Perform food tests. Changes to performance criteria. Foundation skill information added. Range of conditions removed. Assessment requirements amended.</p>

Application

This unit of competency describes the skills and knowledge to interpret food test requirements, prepare samples, conduct pre-use and calibration checks on equipment, and perform routine testing of raw food materials, in-process materials and final products. These tests will involve several measurement steps. The unit includes data processing and some interpretation of results and tracking of obvious test malfunctions where the procedure is standardised. However, personnel are not required to analyse data, optimise tests/procedures for specific samples or troubleshoot equipment problems where the solution is not apparent.

This unit applies to laboratory or technical assistants and instrument operators working in the food and beverage processing 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

Nil

Competency Field

Testing

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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<p>1 Interpret and schedule test requirements</p>	<p>1.1 Review test request to identify samples to be tested, test method and equipment/instruments involved</p> <p>1.2 Identify hazards and workplace controls associated with the sample, preparation/test methods, reagents and/or equipment</p> <p>1.3 Plan parallel work sequences to optimise throughput of multiple sets of samples</p>
<p>2 Receive and prepare food samples</p>	<p>2.1 Log samples using standard operating procedures (SOPs)</p> <p>2.2 Record sample description, compare with specification and note and report discrepancies</p> <p>2.3 Prepare samples and standards in accordance with food testing requirements</p>
<p>3 Check equipment before use</p>	<p>3.1 Set up equipment/instruments in accordance with test method requirements</p> <p>3.2 Perform pre-use and safety checks in accordance with relevant workplace and operating procedures</p> <p>3.3 Check equipment calibration using specified standards and procedures</p> <p>3.4 Inspect reagents required for quality issues including visual checks and expiry</p>
<p>4 Test samples to determine food components and characteristics</p>	<p>4.1 Operate equipment/instruments in accordance with test method requirements</p> <p>4.2 Perform tests/procedures on all samples and standards in accordance with specified methods</p> <p>4.3 Shut down equipment/instruments in accordance with operating procedures</p>

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
5 Process data	<p>5.1 Record test data noting atypical observations</p> <p>5.2 Construct calibration graphs and compute results for all samples from these graphs</p> <p>5.3 Ensure calculated values are consistent with reference standards and expectations</p> <p>5.4 Record and report results in accordance with workplace procedures</p> <p>5.5 Determine if basic procedure or equipment problems have led to atypical data or results</p>
6 Maintain a safe work environment	<p>6.1 Use established safe work practices and personal protective equipment (PPE) to ensure personal safety and that of other laboratory personnel</p> <p>6.2 Minimise the generation of wastes and environmental impacts</p> <p>6.3 Ensure the safe collection of laboratory and hazardous waste for subsequent disposal</p> <p>6.4 Care for and store equipment and reagents as required</p>
7 Maintain laboratory records	<p>7.1 Make entries on report forms or into a laboratory information management system accurately calculating, recording or transcribing data as required</p> <p>7.2 Ensure traceability of sample from receipt to reporting of results</p>

Foundation Skills

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

- Numeracy skills to:
 - process data, interpret gross features of data/results and make relevant conclusions

- prepare calibration graphs and calculate results using appropriate equations, units, uncertainties and precision
- Problem-solving skills to:
 - identify atypical results as either out-of-normal range or an artefact
 - trace and source obvious causes of an artefact, track obvious test malfunctions for standardised procedures, and troubleshoot basic equipment and methods.

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

Unit Mapping Information

Equivalent to MSL974004 Perform food tests, 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>