



Australian Government

Assessment Requirements for MSL974033 Perform food tests

Release: 1

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Modification History

Release 1. Supersedes and equivalent to MSL974020 Perform food tests. Element 7 integrated into Element 5. Minor changes to Performance Criteria. Microbiology and molecular tests added as options to Performance Evidence. Changes to Knowledge Evidence to remove or merge duplicating items.

Performance Evidence

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

- performed at least 5 routine food tests or procedures involving several measurement steps, including at least 4 of the following:
 - sensory tests
 - visual inspection
 - package integrity and compatibility test
 - physical/mechanical tests
 - chemical tests
 - thermal tests including stability of products and effectiveness of heat treatments
- prepared samples using 3 different processes including at least 2 of the following:
 - grinding and milling
 - preparation of discs
 - digestion
 - extracting
 - refluxing
 - degassing
 - enzymatic treatment
 - washing and drying
 - ashing and temperature equilibration
 - precipitation and centrifugation
 - filtration
 - flocculation
 - evaporation.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- basic principles and concepts underpinning the food tests or procedures including:

- structure and properties of proteins, lipids, carbohydrates, vitamins and minerals
- food additives, flavourings and essences
- nutrient value of major food groups
- interaction of water with food components
- chemical and microbial changes in food
- food preservation techniques including atmosphere and modified atmosphere in relation
- basic biochemistry of fermentation reactions
- function of packaging for product integrity and controlled atmosphere
- quality control program for raw materials, process control and finished product inspection
- principles and purpose of food tests performed as part of the job role
- basic principles and concepts related to equipment and instrument operation
- function of key components of equipment/instrument and effects on the test of modifying equipment and instrument variables
- concepts of metrology, including:
 - all measurements are estimates
 - precision, accuracy and significant figures
 - sources of error, uncertainty and repeatability
 - traceability
- common sample preparation processes relevant to job role
- types of food tests and procedures:
 - sensory tests
 - visual tests of content and package
 - physical/mechanical tests
 - chemical analysis
 - microbiological tests
 - molecular tests
 - thermal tests including stability of products and effectiveness of heat treatments
- workplace and/or legal traceability requirements
- awareness of environmental sustainability issues as they relate to the work task
- legal, ethical and work health and safety (WHS) requirements specific to the work task.
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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:
 - a standard laboratory equipped with test equipment, instruments, standards and materials

- workplace procedures and standard methods
- records, including:
 - test and calibration results
 - equipment use, maintenance and servicing history.

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

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>