



Australian Government

Assessment Requirements for MSL974004 Perform food tests

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MSL974004A Perform food tests

Performance Evidence

Evidence of competence in this unit must satisfy all of the requirements of the elements and performance criteria, and include demonstration of:

- performing at least five (5) routine food tests or procedures involving several measurement steps
- interpreting food testing methods and procedures accurately
- preparing samples using at least three (3) different processes
- maintaining and evaluating reagents
- conducting pre-use and calibration checks on equipment, and quarantining out-of-calibration equipment and instruments
- safely operating test equipment and instruments to workplace standards and manufacturer specification
- processing data, interpreting gross features of data/results and making relevant conclusions
- preparing calibration graphs and calculating results using appropriate equations, units, uncertainties and precision
- identifying atypical results as either out-of-normal range or an artefact
- tracing and sourcing obvious causes of an artefact, tracking obvious test malfunctions for standardised procedures, and troubleshooting basic equipment and methods
- communicating problems to a supervisor or outside service technician
- recording and communicating results in accordance with workplace procedures
- maintaining security, integrity and traceability of samples, sub-samples, test data, results and documentation
- following workplace safety procedures

Knowledge Evidence

Must provide evidence that demonstrates knowledge of:

- principles and concepts underpinning the food tests or procedures performed, such as:
 - ions, atoms, molecules, bonding, affinities and related properties
 - chemical reactions (acid/base and complexometric)
 - 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

- microbiology, including incubation characteristics, selective media, growth stages of bacterial cultures and reference organisms
- microbiology of organisms with public health significance
- chemical and microbial changes in food
- food preservation techniques
- fermentation process
- packaging and controlled atmosphere
- elastic properties of materials and hardness
- cohesive/adhesive forces, fluid flow and viscosity
- changes of state, energy content and enthalpy change
- electromagnetic spectrum and absorption, emission and refraction of light
- quality control program for raw materials, process control and finished product inspection
- genetically modified foods
- purpose of the food tests or procedures conducted
- concepts of metrology, principles and concepts related to equipment and instrument operation and tests or procedures
- function of key components of the equipment/instrument used
- effects on the test of modifying equipment/instrument variables
- workplace and/or legal traceability requirements
- relevant hazards, work health and safety (WHS) and environment requirements.

Assessment Conditions

- Judgment of competence must be based on holistic assessment of the evidence. Assessment methods must confirm consistency of performance over time, rather than a single assessment event.
- This unit of competency is to be assessed in the workplace or a simulated workplace environment. A simulated workplace environment must reflect realistic operational workplace conditions that cover all aspects of workplace performance, including the environment, task skills, task management skills, contingency management skills and job role environment skills.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Knowledge evidence may be collected concurrently with performance evidence or through an independent process, such as workbooks, written assessments or interviews (provided a record is kept in each case).
- This unit of competency may be assessed with:
 - MSL924001 Process and interpret data
- Holistic assessment methods include:

- review of test data/results obtained by the candidate over a period of time to check accuracy, consistency and timeliness of results
- review of test records and workplace documentation completed by the candidate
- feedback from peers and supervisors
- observation of candidate conducting a range sample preparations and food tests and procedures
- oral or written questioning of food technology concepts and principles, food tests and procedures and workplace procedures.
- Access is required to instruments, equipment, materials, workplace documentation, procedures and specifications associated with this unit, including, but not limited to:
 - 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 assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- The assessor must demonstrate both technical competence and currency.
- Technical competence can be demonstrated through:
 - relevant VET or other qualification/Statement of Attainment AND/OR
 - relevant workplace experience.
- Currency can be demonstrated through:
 - performing the competency being assessed as part of current employment OR
 - having consulted with a laboratory about performing the competency being assessed within the last twelve months.

Links

Companion Volume implementation guides are found in VETNet -
<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>