



Australian Government

Assessment Requirements for MSL975071

Perform food analyses

Release: 1

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Modification History

Release 1. Supersedes and equivalent to MSL975050 Perform food analyses. Content of Element 6 integrated into Element 5. Minor changes to Performance Criteria. Removal of content that repeats the prerequisite unit from Performance Evidence. Minor changes to Knowledge Evidence including addition of a reference to intellectual property.

Performance Evidence

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

- prepared and analysed the nutrient and ingredient composition of 2 different foods containing a minimum of 2 different ingredients in each using at least 1 of the following analytical instruments:
 - spectrometric instruments
 - chromatographic techniques and instruments
 - gas chromatography mass spectroscopy (GC-MS)
 - electrophoretic techniques
 - electrometric techniques
- accurately identified and quantified chemical and biological contaminants in at least 1 raw food sample and at least 1 processed food sample.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- scope and purpose of analysing nutritional/ingredient composition, including:
 - optimising production processes
 - nutritional information
 - labelling requirements
 - food safety
 - establishment, monitoring and troubleshooting of the hazard analysis and critical control point (HACCP) process
- analyses commonly used for additive and nutrient composition and identification of contaminants
- general composition of common food and/or beverages relevant to the job role
- key food processing and preservation techniques, packaging and controlled atmosphere storage and their effect on nutrients
- food labelling regulations and their implications for nutritional claims
- sample preparation methods and correct storage conditions for specific food samples and tests relevant to job role

- principles and purpose of test methods implemented (why they are used and what they demonstrate)
- technological advances that include automation
- function of key components of the equipment/instrument used and effects of modifying equipment/instrument variables on tests
- identification of any hazards associated with the samples and/or analytical chemicals
- basic procedure and equipment troubleshooting techniques, including:
 - equipment maintenance procedures
 - calculation steps to give results in appropriate units and precision
 - sources of error in specific tests and reproducibility and accuracy of commonly used test method for nutrient analysis
- impact of public perception of food safety and nutrition on food analysis
- requirements including genetically modified foods, food irradiation, antibiotics and specific nutrient composition
- nature, structure and function of food additives
- food allergies and intolerances
- glycaemic index (GI) and its significance
- significance of digestion and absorption of macro and micro-nutrients in food and the implications of food additives and fortification on absorption of nutrients,
- 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 including traceability, intellectual property, confidentiality and security of client information and laboratory data and records.
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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 with appropriate analytical instruments, laboratory reagents, equipment and samples
 - workplace procedures and test methods.

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>