



Australian Government

Assessment Requirements for MSL975046 Perform complex tests to measure chemical properties of materials

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 MSL975018 Perform complex tests to measure chemical properties of materials. Conditional/optional prerequisite removed – code retained. Changes to elements and performance criteria. Range of conditions removed. Assessment requirements amended.

Performance Evidence

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

- isolated analytes from 3 different complex matrices and performed multi-staged and/or multi-component analysis on each.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- principles and concepts underpinning the analysis:
 - nature of specific sample matrices
 - effects of interferents with analyte behaviour, including ionisation, complexation, precipitation, masking and association
 - quantification methods
 - chemical and physical treatments to minimise interferences
- special needs for sample treatment or pre-treatment
- function of key components of equipment and effects of modifying instrumental variables on outputs and results
- typical sample preparation techniques
- quantification techniques
- analytical techniques
- typical analytes and samples requiring complex tests
- typical tests for completeness of sample preparation:
 - visual inspection for colour and solids

- odour
- pH and conductivity
- chemical tests for interferents, such as precipitation and colour forming
- basic screening instrumental tests, such as infrared, ultraviolet-visible (UV-VIS) and gas chromatography
- modifiers
- sample preparation procedures used for analyses
- basic equipment maintenance procedures
- calculation steps to give results in appropriate units, precision and uncertainty
- 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, confidentiality and security requirements of all client information, and laboratory data and records.

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
 - specialised analytical instruments, laboratory reagents and equipment, standard operating procedures (SOPs) and test methods.

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

Links

Training Package Companion Volumes -

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