



Australian Government

Assessment Requirements for MSL975066 Apply routine chromatographic techniques

Release: 1

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Modification History

Release 1. Supersedes and equivalent to MSL975040 Apply routine chromatographic techniques. Element 6 integrated into Element 5. Minor changes to Performance Criteria. Clarification that different chromatographic techniques are required in Performance Evidence. Removal of duplicating items in Knowledge Evidence.

Performance Evidence

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

- prepared samples using at least 3 different processes
- analysed at least 3 different samples using 3 different chromatographic techniques to obtain valid and reliable data.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- chromatographic principles and concepts related to instrumentation operation, material preparation and testing
- use of different chromatographic methods for qualitative and quantitative analysis and preparation of specific samples relevant to job role
- handling of unstable or hazardous chemicals and samples
- functions of key components of the instruments and effects on outputs and results of modifying instrumental variables
- calculation steps to give results in appropriate accuracy, precision, uncertainty and units
- selection of appropriate separation technique, such as suitable substrate and support solvent, buffer, temperature, flow rate, column length and detection method
- principles and purpose of test methods implemented (why they are used and what they demonstrate)
- technological advances that include automation
- workplace procedures for:
 - optimising separation through changing operation parameters
 - equipment troubleshooting techniques
 - basic equipment maintenance
- common procedure and equipment problems, including:
 - problems with interfering substances
 - poor resolution of peaks
 - inappropriate selection of column or operating parameters (flow rate and temperature)

- unsuitable substrate or support solvent
- lack of suitable reference standards
- 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 equipped with routine chromatographic equipment, laboratory reagents and equipment
 - 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>