Assessment Requirements for MSL975040
Apply routine chromatographic techniques
Assessment Requirements for MSL975040 Apply routine chromatographic techniques

Modification History

<table>
<thead>
<tr>
<th>Release</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Release 1</td>
<td>This version was released in <em>MSL Laboratory Operations Training Package Release 2.0</em>. Supersedes and equivalent to MSL975009 Apply routine chromatographic techniques. Conditional/optional prerequisite removed – code retained. Changes to elements and performance criteria. Range of conditions removed. Assessment requirements amended.</td>
</tr>
</tbody>
</table>

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 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
- routine chromatographic techniques for analytical and preparative procedures
- common test methods
- sample preparation
- 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:
  - 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
  - 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.education.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa