



Australian Government

Assessment Requirements for MSL975039

Apply electrophoretic techniques

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 MSL975008 Apply electrophoretic techniques. 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:

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

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- electrophoretic principles and concepts related to instrumentation operation, material preparation and testing
- details of electrophoresis techniques used to analyse samples relevant to job role
- handling of unstable or hazardous chemicals or samples and/or the fragile/labile nature of biological material
- function of key components of the equipment and effects on results of modifying instrumental variables, such as field strength, constant current and constant power
- procedures for optimising separation through changing operation parameters, such as buffers, pH and detection methods
- common analytical procedure and equipment problems, including:
 - interfering substances
 - inappropriate support material or operating procedures
 - toxic or hazardous materials, including impurities in samples
 - lack of suitable or high purity reference standards

- changes in operating variables, such as field strength, constant current, constant power, buffers and pH
- obtaining adequate sample volume
- principles and purpose of test methods implemented (why they are used and what they demonstrate)
- technological advances that include automation
- basic procedure and equipment troubleshooting techniques
- calculation steps to give results in appropriate accuracy, precision, uncertainty and units
- electrophoretic methods, for both analytical and preparative procedures:
- typical test methods
- typical sample preparation
- basic equipment maintenance procedures
- 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 electrophoresis equipment, laboratory reagents and equipment
 - standard operating procedures (SOPs) and testing 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>