



Australian Government

Assessment Requirements for MSL974031

Prepare, standardise and use solutions

Release: 1

Assessment Requirements for MSL974031 Prepare, standardise and use solutions

Modification History

Release 1. Supersedes and equivalent to MSL974017 Prepare, standardise and use solutions. Changes to Performance Criteria to remove requirements in relation to primary and secondary standards and indicators, equivalence points using indicators and graphical methods. Graphical methods removed from Foundation Skills. Superfluous terminology item removed from Knowledge Evidence and detail reduced in Assessment Conditions.

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 standardised at least 3 different solutions in accordance with workplace procedures.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- chemical symbols and atomic mass
- scientific terminology for different types of solutions
- what affects solubility
- formulae for calculating concentration % w/w, % w/v, % v/v, ppm (mg/L)
- moles and molarity
- the chemistry of acids, bases, buffers and redox reactions
- concepts of metrology, including:
 - all measurements are estimates
 - precision, accuracy and significant figures
 - sources of error, uncertainty and repeatability
 - traceability
- reactions used for standardisation and desirable characteristics
- function and use of basic laboratory equipment
- grades of glassware, reagents and their use
- established safe work practices, including:
 - use of personal protective equipment (PPE)
 - correctly labelling reagents and hazardous materials
 - handling and storing hazardous material and equipment in accordance with labels, safety data sheets (SDS), manufacturer instructions, and workplace procedures and regulations

- regular cleaning and/or decontamination of equipment and work areas
- prompt clean-up of spills in accordance workplace procedures
- awareness of environmental sustainability issues as they relate to the work task.
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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 equipped with appropriate reagents and equipment to prepare and standardise solutions
 - containers and storage facilities
 - workplace procedures.

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>