



Australian Government

Assessment Requirements for MSL973014

Prepare working solutions

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 MSL973002 Prepare working solutions. 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:

- safely prepared at least 5 examples of correctly labelled working solutions, including calculation of the quantities involved and any dilutions required
- checked existing stocks of working solutions and identified those unfit for use.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- concepts of metrology, including:
 - all measurements are estimates
 - precision, accuracy and significant figures
 - sources of error, uncertainty and repeatability
 - traceability
- working solutions
- international system of units (SI)
- concentration terms, such as % w/w, % w/v, % v/v, ppm (mg/L) and molarity
- basic theory of acids, bases, salts, buffers and neutralisation
- what affects solubility
- difference between aqueous and organic solutions
- periodic table, symbols of the elements, atomic weights, and difference between elements and compounds
- chemical formulae
- workplace procedures for preparing solutions
- calculations required to prepare specified amounts of solutions of specified concentration

- use of safety data sheets (SDS) and workplace procedures for preparing, handling and disposing of solutions and cleaning up spillages
- 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.

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
 - standard methods and workplace procedures
 - containers and storage facilities.

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>