



Australian Government

MSL934004 Maintain and calibrate instruments and equipment

Release: 1

MSL934004 Maintain and calibrate instruments and equipment

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 <i>MSL935004 Maintain instruments and equipment</i>. Change to elements and performance criteria. Range of conditions removed. Assessment requirements amended.

Application

This unit of competency describes the skills and knowledge to check the serviceability and calibration of laboratory/field instruments and equipment and perform routine maintenance, such as cleaning and replacement of consumables and minor components. Personnel are also required to perform basic troubleshooting and repairs consistent with warranty and service agreements.

This unit of competency applies to technical assistants, instrument operators and technical officers working in all industry sectors.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

Nil

Competency Field

Quality

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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|---|-------------------------------|-----|---|
| 1 | Perform serviceability | 1.1 | Perform pre-use and after-use checks in accordance with appropriate workplace and manufacturer procedures |
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Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

	checks	1.2	Identify faulty or unsafe components and equipment
		1.3	Identify and analyse service faults and report for appropriate for maintenance and/or repair
		1.4	Complete instrument/equipment logbooks to workplace requirements
2	Conduct routine maintenance safely	2.1	Identify maintenance procedures, records and safety requirements
		2.2	Plan and adjust maintenance schedules in accordance with operational requirements
		2.3	Identify and replace or repair damaged, worn and/or spent components or items
		2.4	Clean instruments and equipment using recommended cleaning agents and techniques
		2.5	Store instruments and equipment in accordance with workplace and/or manufacturer requirements
		2.6	Update maintenance records in accordance with workplace procedures
		2.7	Arrange for reordering of consumable stocks and equipment components as necessary
3	Perform calibration/qualification checks	3.1	Operate instruments and equipment in accordance with workplace and/or manufacturer procedures
		3.2	Check calibration/qualification using specified standards and/or procedures
		3.3	Record all calibration/qualification data accurately and legibly
		3.4	Document calibration status and report out-of-calibration equipment/instruments
		3.5	Quarantine out-of-calibration items

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

- Reading skills to effectively interpret standard procedures and manufacturer requirements
- Writing skills to accurately record data and complete maintenance records
- Oral communication skills to interact effectively with suppliers and service agents.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Equivalent to MSL935004 Maintain instruments and equipment, Release 1.

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>

Assessment Requirements for MSL934004 Maintain and calibrate instruments and equipment

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Performance Evidence

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

- checked the serviceability of at least 3 laboratory/field instruments or items of equipment and performing routine maintenance on each
- accurately conducted calibration status/qualification checks for at least 2 instruments or items of equipment.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- role and importance of regular calibration checks and maintenance of instruments and equipment, and maintenance schedules and procedures
- function of key components of the instrument or equipment operating principles, details of the pre-use, calibration and safety checks, and operating procedures for the items used
- sources of uncertainty in instrument or equipment operation and their control
- common laboratory instruments and equipment
- equipment manuals and warranties
- common sources of faults in the instruments or equipment used and details of their repair
- typical basic repairs carried out on equipment
- typical calibration status/qualification checks
- basic equipment cleaning, maintenance and storage procedures for items of equipment used
- service agents or other personnel accredited to calibrate, service and repair equipment used in job role

- process involved in arranging calibration, repair and/or maintenance of equipment including assessment of instrument repair status and determining if local repair or maintenance is possible and economical
- workplace procedures for recording data and reporting results, communicating with service agents and suppliers and ordering stocks
- 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:
 - standard laboratory equipped with appropriate instruments and equipment, reference materials, consumables; cleaning, decontamination and/or disinfection agents and equipment; and personal protective equipment (PPE)
 - workplace procedures, calibration and maintenance schedules, equipment manuals, supplier catalogues and information/records management system.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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