



**Australian Government**

# **MSL977007 Troubleshoot equipment and/or production processes**

**Release: 1**

## MSL977007 Troubleshoot equipment and/or production processes

### Modification History

Release	Comments
Release 1	<p>This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>.</p> <p>Supersedes and equivalent to MSL977002 Troubleshoot equipment and/or production processes. Range of conditions removed. Assessment requirements amended. Equivalent outcome.</p>

### Application

This unit of competency covers the ability to apply technical, instrumental and equipment knowledge and skills to troubleshoot testing equipment and testing issues related to production processes, identify problems and recommend corrective action.

This unit applies to senior technical officers, laboratory supervisors and technical specialists working in all industry sectors. All operations must comply with relevant standards, appropriate procedures and/or workplace requirements. Troubleshooting is the process of using technical knowledge and skills to investigate abnormal performance and assay results. This unit of competency includes troubleshooting testing equipment and testing issues related to production processes. In the case of chromatography, for example, these problems may be related to materials, such as laboratory solvents, procedures or equipment components, such as columns, injectors, pumps and detectors.

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

Testing

### 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	<b>Identify abnormal equipment and/or process performance</b>	<ul style="list-style-type: none"> <li>1.1 Determine whether testing equipment is operating to manufacturer specifications</li> <li>1.2 Recognise whether equipment outputs are consistent with normal operation</li> <li>1.3 Identify signs of equipment degradation and impending failure</li> <li>1.4 Inspect equipment outputs to determine nature of the problem</li> <li>1.5 Define nature of substandard performance</li> </ul>
2	<b>Identify causes of substandard performance</b>	<ul style="list-style-type: none"> <li>2.1 Select appropriate technical process for investigation</li> <li>2.2 Identify causes using fact-finding processes, including interviews with appropriate personnel</li> <li>2.3 Review maintenance records to ensure that system does not need simple maintenance</li> <li>2.4 Review calibration records to ensure system is within calibration</li> <li>2.5 Verify that the appropriate test procedure, materials and equipment were used</li> <li>2.6 Conduct performance tests as appropriate to investigation</li> <li>2.7 Analyse equipment and/or testing variables to develop list of possible causes</li> <li>2.8 Isolate causes using appropriate elimination techniques</li> </ul>
3	<b>Recommend corrective action</b>	<ul style="list-style-type: none"> <li>3.1 Propose and trial corrective action based on investigation</li> <li>3.2 Monitor trial data to ensure outputs are consistent with normal operation</li> <li>3.3 Review trial results to confirm validity of corrective</li> </ul>

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action

- 3.4 Maintain workplace records as required
- 3.5 Submit report summarising investigation and recommendations

## Foundation Skills

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

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

## Unit Mapping Information

Equivalent to MSL977002 Troubleshoot equipment and/or production processes, Release 1.

## Links

Training Package Companion Volumes -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>