



Australian Government

MSL974023 Capture and manage scientific images

Release: 1

MSL974023 Capture and manage scientific images

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 MSL974008 Capture and manage scientific images. Range of conditions removed. Assessment requirements amended.

Application

This unit of competency describes the skills and knowledge to capture accurate and reproducible images of scientific (environmental, medical and technical) subjects using a scientific approach and workplace procedures/protocols to ensure the integrity of the image. It also includes the ability to generate and maintain pre- and post-image capture records to ensure that images can be reproduced.

This unit applies to laboratory technicians 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

Testing

Elements and Performance Criteria

Elements describe the essential outcomes.

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

1 Establish requirements for image capture

- 1.1 Define requirements and purpose of the work and create a brief
- 1.2 Choose an imaging technique that maintains the integrity and veracity of the subject and fulfils the work

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
		requirements	
		1.3	Plan the work using technical knowledge to ensure an effective and efficient result
2	Plan and set up the shoot	2.1	Select and assemble the required equipment
		2.2	Follow ethical and legal work practices at all times
		2.3	Assess risks or hazards and implement safety procedures
		2.4	Prepare the subject to achieve the brief
3	Capture and reproduce the required image	3.1	Expose media or film and accurately document the work in progress
		3.2	Review the image against the work requirements and repeat if necessary
		3.3	Reproduce the image to specification
4	Keep records and deliver images	4.1	Accurately and retrievably record the request, technical specifications and images so that they are retrievable
		4.2	Store records safely and securely to archival standards
		4.3	Follow copyright and crediting policies and procedures
		4.4	Deliver images and confirm accuracy

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 MSL974008 Capture and manage scientific images, 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 MSL974023 Capture and manage scientific images

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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:

- captured and delivered accurate and reproducible images of at least 5 scientific subjects using a scientific approach and workplace procedures/protocols to ensure the integrity of the images.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- workplace policies and procedures for capturing and managing scientific images
- repercussions of manipulation of images and differences between adjustment and manipulation
- scientific approach and protocols to ensure integrity of images
- scientific imaging techniques:
 - photographic (digital, transparencies and prints)
 - video
 - other non-visible light sources, such as ultraviolet (UV) light, fluorescence and phosphorescence
 - direct transformation from images to data, such as reading of DNA sequencing gels
 - X-ray and auto-radiations
 - micrographs and electron micrographs
- purpose of the image:
 - publication as a thesis
 - presentation on the web
 - temporal serial recording of changes over time

- display as a poster, diorama, print or projection
- preview, snapshot or proof of an image for production at a later stage
- records of data for inclusion in databases
- use in forensic investigation or court proceedings
- veracity of different types of storage media
- ethical and legal work practices:
 - industry codes of practice, contracts, permits, intellectual property (IP), crediting, plagiarism and copyright
 - moral rights, model release, etiquette, decorum and sensitivity towards the subject, and confidentiality
- production of images:
 - sending images for processing
 - processing the images
 - use of commercial software
- storage of records:
 - the brief, technical specifications and images
 - file management (back-ups, data retrieval and storage)
 - paper-based, electronic or digital
- 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:
 - facilities, equipment (e.g. lighting, backdrops, camera systems and accessories) and materials required for image capture
 - workplace procedures, equipment manuals, industry catalogues and journals
 - job requirements, specifications and/or briefs, and records.

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

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