



Australian Government

MSL973029 Perform histological procedures

Release: 1

MSL973029 Perform histological procedures

Modification History

Release 1. Supersedes and equivalent to MSL973020 Perform histological procedures. Changes to Performance Criteria, Performance Evidence and Knowledge Evidence.

Application

This unit of competency describes the skills and knowledge to perform straightforward histological procedures involving processing and sectioning (by rotary microtome) of plant and/or animal tissues in paraffin wax.

This unit of competency applies to laboratory assistants working in biomedical, biotechnology, environmental and education sectors. Personnel will work under direct supervision and have ready access to workplace procedures.

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	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Process tissue	1.1 Perform pre-use checks to ensure processor is fit for purpose 1.2 Check reagents are in sequential order 1.3 Inspect processor reagents for deterioration and adequate volume, and report any items requiring replacement 1.4 Select program for processing
2. Embed tissue	2.1 Perform pre-use check to ensure embedding centre is fit for purpose and uninterrupted embedding of processor load 2.2 Embed tissue types in correct orientation and characteristics that

Elements	Performance Criteria
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	minimise tissue loss and artefacts during microtomy 2.3 Apply procedures to prevent cross-contamination between tissues 2.4 Inspect blocks, reject and re-embed items that do not meet quality control standards
3. Cut sections of tissue	3.1 Label required number of microscope slides in accordance with workplace traceability requirements 3.2 Check the flotation bath is ready and satisfactory for use 3.3 Secure block in microtome following specified safety directions 3.4 Cut representative sections at the required thickness observing prescribed safety measures 3.5 Float sections onto water bath to flatten tissues and pick up sections onto microscope slides ensuring identification on slides matches that on the block 3.6 Compare the blocks and sections ensuring the tissue on slides matches that in the blocks 3.7 Apply procedures to prevent cross-contamination between samples 3.8 Inspect sections and reject any that do not meet quality control standards
4. Stain sections	4.1 Label specimens in accordance with workplace traceability requirements 4.2 Select reagents specified in workplace procedures 4.3 Stain sections according to workplace procedures 4.4 Mount sections ensuring no bubbles 4.5 Examine sections microscopically to ensure expected staining outcomes have been achieved 4.6 Inspect slides and reject any that do not meet quality control standards
5. Maintain a safe work environment	5.1 Ensure personal safety and minimise cross-contamination using personal protective equipment (PPE) 5.2 Handle chemicals and sharps safely

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

Supersedes and is equivalent to MSL973020 Perform histological procedures.

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>