



Australian Government

MSL954006 Relate anatomical and physiological features to laboratory samples

Release: 1

MSL954006 Relate anatomical and physiological features to laboratory samples

Modification History

Release 1. Supersedes and is equivalent to MSL954003 Relate anatomical and physiological features to laboratory samples. Changes to Element titles, Performance Criteria and Knowledge Evidence to define scope of unit.

Application

This unit of competency describes the skills and knowledge to recognise and interpret different types of biological test samples to direct the specimen to the appropriate laboratory for testing. It covers knowledge of anatomy to interpret histology samples and knowledge of physiology to interpret pathology samples.

This unit applies to technicians who work in pathology laboratories. The unit principally refers to human pathology, but many aspects are relevant to veterinary pathology. This unit of competency assumes that the laboratory technician would operate under the close supervision of scientific and/or medical staff. Although a supervisor may not always be present, the technician will follow workplace procedures that clearly describe the scope of permitted practice.

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.

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. Recognise body systems and organs	1.1 Correctly identify sampled organs based on macroscopic appearance and main function 1.2 Use correct terminology to name organs and systems 1.3 Identify broad streams of disease that effect body systems and organs
2. Recognise tissues and	2.1 Correctly identify tissue types based on microscopic structure

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
cells	2.2 Correctly identify cell types based on microscopic structure 2.3 Use correct terminology to name tissue and cell types
3. Identify and direct test specimens	3.1 Use knowledge of body systems, organs and tissues to confirm the identity of fresh, fixed and treated biological test samples 3.2 Confirm test sample type matches test request 3.3 Follow procedures to direct test specimen to appropriate laboratory for testing

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 MSL954003 Relate anatomical and physiological features to laboratory samples.

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 MSL954006 Relate anatomical and physiological features to laboratory samples

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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:

- correctly named the specific sample type from the macroscopic appearance of at least 4 different test samples from each of the following categories (12 in total):
 - organs or organ biopsies
 - tissues
 - body fluids
- for each test sample, identified the appropriate laboratory for testing
- correctly named the specific cell type from the microscopic appearance of at least 5 different cell types from each of the following (10 in total):
 - blood cells
 - tissue cells.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- fundamental word structure used in medical terms as they relate to common pathology samples and tests
- name and main function of body systems, including:
 - muscular
 - skeletal
 - digestive
 - circulatory
 - respiratory
 - urinary
 - reproductive
 - nervous (including sensory)
 - endocrine
 - integumentary
 - lymphatic/immune

- name, function and key identifying structures of organs commonly sampled for pathological investigation
- name and function of types of tissue, including:
 - epithelial including subtypes
 - connective
 - muscular including subtypes
 - nervous
 - vascular including subtypes
 - glandular
 - lymphatic
- basic common cell types, their functions and locations, including:
 - histological
 - haematological
 - immunological
- basic principles of innate and acquired immunity as they relate the respiratory, urinary, digestive and lymphatic/immune system
- types of specimens and relating organs, including:
 - histological
 - formalin fixed tissue (punch biopsy, core biopsy, wedge biopsy, cytology, full organs)
 - fresh
 - microbiological, including:
 - fresh tissue
 - stool
 - body fluids:
 - blood
 - urine
 - sputum
 - swabs
 - cerebral spinal fluid (CSF)
 - haematological and immunohaematological, including:
 - blood products
 - bone marrow
 - biochemical, including:
 - whole blood
 - plasma
 - body fluids
- nature of precious specimens, including:
 - CSF
 - time sensitive

- temperature sensitive
- autopsy
- broad streams of disease as they relate to common sample types, including:
 - cancer
 - metabolic
 - microorganisms
 - hormonal
- roles of different transport media, coagulants and preservation fluids
- common abbreviations for medical and pharmacological terms, including:
 - for histology: IF, EM, LM, IHC, HE and ISH
 - for microbiology: FEC, MSC, culture, sensitivity, CSF and MSU
 - for haematology: FBC, Hct, ESR, Coags and INR
 - for biochemistry: Disacc Fe, LFT, TFT, Chol, Trig, PSA, EUC and CEA.
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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 resources, including:
 - specimens covering fresh, fixed and treated biological test samples from different body systems, organs, tissue types, cells and diseases.

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

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