



**Australian Government**

# **Assessment Requirements for MSL975036**

## **Perform haematological tests**

**Release: 1**

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## 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 MSL975002 Perform haematological tests. Changes to elements and performance criteria. Foundation skills information added. Range of conditions removed. Assessment requirements amended.</p>

## Performance Evidence

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

- safely and accurately performed and interpreted at least 3 haematological tests or procedures from the list below:
  - packed cell volume (PCV)
  - erythrocyte sedimentation rate (ESR)
  - platelet estimation
  - reticulocyte count
  - haemoglobin (Hb) measurement
  - coagulation tests including prothrombin time
- accurately performed and interpreted the following tests, recording results for at least 3 samples, including 1 normal and 2 abnormal, for each of the following:
  - calculate red cell indices including mean cell volume (MCV), mean cell haemoglobin (MCH), and mean cell haemoglobin concentration (MCHC)
  - white blood cell (WBC) differential
  - red blood cell (RBC), WBC and platelet morphology
- used accurate terminology
- visually differentiate a variety of sample conditions including clotted, lipemic, haemolysed and inadequate samples.

## Knowledge Evidence

There must be evidence the candidate has knowledge of:

- scientific, medical, clinical, technical and workplace terminology relevant to normal and abnormal haematology, including anatomy, physiology, genetics, biochemistry and immunology
- basic structure and function of red blood cells, white blood cells and platelets
- structure, function and metabolic variants of Hb
- basic principles of haemostasis and the effects of therapeutic drugs on coagulation mechanisms
- routine test performed in haematology laboratories and their purpose including:
  - full blood count
  - routine haematological stains
  - blood film examination
  - ESR
  - coagulation tests
  - haemoglobin measurement
- morphological variation of red blood cells, white blood cells and platelets and their significance as a diagnostic indicator
- key diagnostic laboratory findings used to identify common haematological disorders including:
  - anaemias and the common subtypes including macrocytic, microcytic and normocytic
  - acute leukaemias
  - mature lymphoproliferative disorders
  - myeloproliferative disorders
  - myelodysplastic syndromes
  - microbiological infections including malaria
  - coagulopathies
- importance of identifying immature cells including nucleated red blood cells (NRBC) and blasts
- actions required when abnormal parameters are identified
- importance of further testing to confirm diagnosis
- technological advances in haematology including automation of full blood counts, coagulation assays and point of care testing:
  - advantages and limitation of automation
  - importance of equipment maintenance and use of controls
- relationships that exist between the sample and the test result, including:
  - sample collection
  - the preservation and timely testing of samples
  - sample transport and storage conditions and issues of fixation/staining artefact
- trouble shooting of common sample quality issues
- 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 including traceability, confidentiality and security requirements of all clinical information, and laboratory data and records.

## 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:
  - a standard haematology laboratory with relevant equipment, samples and reagents, laboratory information system, databases and record/filing system
  - instruments for the semi-automated or automated electronic counting and partial characterisation of blood cells, the measurement of haemoglobin and the computation of red cell indices
  - workplace procedures, test methods and equipment manuals.

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

## Links

Training Package Companion Volumes -

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