



Australian Government

MSL975030 Perform immunohaematological tests

Release: 1

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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 <i>MSL975006 Perform immunohaematological tests</i>. Pre-requisite removed. Changes to elements and performance criteria. Foundation skill information added. Range of conditions removed. Assessment requirements amended.

Application

This unit of competency describes the skills and knowledge to perform routine tests and procedures that are part of the requirements of pre- and post-blood transfusion practice. The unit also covers tests and procedures that are indicated in laboratory investigations in obstetric and perinatal medicine, in suspected haemolysis and haemolytic episodes, and in other clinical circumstances.

This unit applies to technical officers and laboratory technicians working in the biomedical industry sector. It is understood that the management of any transfusion laboratory would establish for itself, in terms of its own responsibility and purposes, the ability of any worker to work in a transfusion science laboratory, regardless of the education and training record or presumed ability of any worker.

Tests will be related to the determination of blood groups and the detection of antibodies of significance in:

- transfusion (as laboratory evidence that *in vivo* cell destruction or immunisation may occur)
- pregnancy and the peri-natal period (as evidence of sensitisation of foetal red cells by transplacental maternal antibody)
- the investigation of haemolysis or haemolytic episodes.

The tests that the worker will use will be validated and authorised procedures, clearly described in the laboratory's manual of procedures. The unit of competency is based on the assumption that technical personnel would perform tests and procedures under the close supervision of scientific and/or medical staff. The parameters of interpretation will be clearly described, indicating for the worker what he or she is permitted to sign-off without reference to supervisors or managers.

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 | Process samples and associated request forms | 1.1 | Identify specimens and request forms that do not comply with minimum industry requirements for labelling, identification and test requests |
| | | 1.2 | Record any discrepancies and indicate what action is required |
| | | 1.3 | Log samples, recording details that allow accurate tracking and chain of custody |
| 2 | Perform tests | 2.1 | Conduct individual tests according to documented standard operating procedures, applying required quality control |
| | | 2.2 | Use appropriate manual techniques to determine patient/donor red cell phenotype and antibody status |
| | | 2.3 | Read and grade tube and card agglutination reactions |
| | | 2.4 | Record and interpret results |
| | | 2.5 | Validate test results and reagents using control cells and reagents |
| | | 2.6 | Complete documentation required to permit the issuing of blood or blood components that have been cleared for use by clinical staff |

Elements describe the essential outcomes.

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

3 Maintain laboratory records

- 3.1 Record entries on report forms or into a laboratory information management system accurately calculating, recording or transcribing data as required
- 3.2 Maintain records of blood and blood products received, used and returned to supplier
- 3.3 Ensure traceability of sample from receipt to reporting of results

Foundation Skills

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

- Oral communication skills to interact effectively with supervisors and managers (laboratory, quality and customer service), personnel in other laboratories in the workplace or in other workplaces to which work may be referred, customers, patients and clients, external auditors and accreditation agencies, such as National Association of Testing Authorities (NATA) and Red Cross Blood Service

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Equivalent to MSL975006 Perform immunohaematological tests, 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 MSL975030 Perform immunohaematological tests

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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:

- safely performed and interpret at least 5 immunohaematological tests following the laboratory's validated and authorised procedures, including:
 - forward and reverse ABO typing
 - RhD phenotyping
 - three cell screen
 - eleven cell panel
 - direct antiglobulin test
 - with 100% accuracy of patient identification in all steps
- performing tests accurately and organising work to ensure the timely release of blood and blood products and needs of relevant patients and clients are met.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- scientific, medical, clinical, technical and workplace terminology relevant to normal and abnormal anatomy, physiology, biochemistry, immunology and immunohaematology
- immunological concepts including:
 - acquired immunity
 - antibody structure and function
 - antigen antibody reactions

- principle and purpose of test methods implemented (why they are used and what they demonstrate)
- basic principles of transfusion reactions
- types of blood products and their use
- what blood products can be issued in an emergency transfusion
- actions required when result interpretation is outside parameters of authorised approval
- relationships that exist between the storage conditions for transfusion products and commercial reagents and the test results
- relationships that exist between the transport conditions for transfusion products and their safe and timely delivery
- technological advances in immunohaematology including automation such as computer cross matching and genotyping to determine blood group
- National Pathology Accreditation Advisory Council (NPAAC) standards for pretransfusion testing
- 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 transfusion/immunohaematology laboratory with relevant equipment, samples, reagents, laboratory information management system, databases and record/filing system
 - workplace procedures, test methods and equipment manuals.

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

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