



Canadian Society for Medical Laboratory Science
Société canadienne de science de laboratoire médical

COMPETENCY PROFILE

Medical Laboratory Assistant

Competencies Expected of an Entry-Level Medical Laboratory Assistant

FEBRUARY 2007

~ Effective with the June 2009 Examination ~

Changes or Edited Competencies are Highlighted in Grey

Code of Professional Conduct

- Medical laboratory professionals are dedicated to serving the health care needs of the public. The welfare of the patient and respect for the dignity of the individual shall be paramount at all times.
- Medical laboratory professionals work with other health care professionals, to provide effective patient care.
- Medical laboratory professionals shall promote the image and status of their profession by maintaining high standards in their professional practice and through active support of their professional bodies.
- Medical laboratory professionals shall protect the confidentiality of all patient information.
- Medical laboratory professionals shall take responsibility for their professional acts.
- Medical laboratory professionals shall practise within the scope of their professional competence.
- Medical laboratory professionals shall endeavour to maintain and improve their skills and knowledge and keep current with scientific advances. They will uphold academic integrity in all matters of professional certification and continuing education.
- Medical laboratory professionals shall share their knowledge with colleagues and promote learning.
- Medical laboratory professionals shall be aware of the laws and regulations governing medical laboratory technology and shall apply them in the practice of their profession.
- Medical laboratory professionals shall practise safe work procedures at all times to ensure the safety of patients and co-workers and the protection of the environment.

Revised November 2011 © CSMLS

Examination Blueprint

~ CSMLS medical laboratory assistant examinations are based on this plan ~

	COMPETENCIES	MARK %
1. Fundamental Competencies	1.01, 1.02, 1.03, 9.05, 9.14	2-5%
2. Safe Work Practices	2.01, 2.02, 2.03, 2.04, 2.05, 2.06, 2.07, 2.08, 2.09, 2.10, 2.11, 2.12, 2.13	10-15%
3. Communication & Interaction	3.01, 3.02, 3.03, 3.04, 3.05, 3.06, 3.07, 3.08	2-4%
4. Data Entry and Specimen Procurement/Receipt	4.01, 4.02, 4.03, 4.04, 4.05, 4.06, 4.07, 4.08, 4.09, 4.10	30-40%
5. Specimen Processing	5.01, 5.02, 5.03	15-25%
6. Pre-analytical Procedures	6.01, 6.02, 6.03, 6.04, 6.05, 6.06	15-25%
7. Reagent/Media Preparation	7.01, 7.02, 7.03, 7.04	1-3%
8. Quality Assurance	8.01, 8.02, 8.03, 8.04, 8.05	2-5%
9. Professionalism	9.01, 9.02, 9.03, 9.04, 9.06, 9.07, 9.08, 9.09, 9.10, 9.11, 9.12, 9.13, 9.15	5-10%

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Assumptions About Medical Laboratory Assistants

The Medical Laboratory Assistant

Upon completion of a training program, has developed a broad knowledge base that is assessed prior to the certification examination.

Practices to ensure the safety of patients, colleagues, self, and the environment.

Contributes to the health care of the public, promotes the welfare of the patient, respects the patient's dignity, and protects patient confidentiality.

Is an integral member of the health care team who shares knowledge, promotes learning, and collaborates with other professionals in providing effective patient care.

Is responsible and accountable for his/her professional actions and practices according to standards of practice as well as laws and regulations governing the profession.

The Client/Patient

The client is any individual who interacts with the medical laboratory assistant, e.g. patient, patient representative, co-worker and other health care professionals.

The patient is any individual requiring medical laboratory services.

The medical laboratory assistant works with clients to procure and prepare specimens for testing.

The medical laboratory assistant maintains effective verbal and written communication skills to facilitate interaction with clients in the provision of a high quality professional service.

The Environment

The medical laboratory assistant is prepared to work in a variety of settings including, but not limited to, hospitals, private medical laboratories, community health departments, educational institutions, long term care facilities, correctional facilities, the home and bedside of the patient, and in private industry.

The medical laboratory assistant works in an environment that is dynamic and evolving, and uses technological equipment to provide information that must be processed accurately and in a timely manner.

Preamble

Professional Responsibility and Collaboration with Health Professionals

The medical laboratory assistant (MLA) meets the legal and ethical requirements of practice and protects the patient's right to the established standard of care. The MLA demonstrates effective interpersonal communication skills with patients, assistants and other health professionals in the workplace. The MLAs are part of the "front line" laboratory staff members. They are often the first persons with whom patients and clients interact. They must demonstrate a professional attitude in order to provide the best health care service possible and continue to maintain the image of the profession within the health care system across Canada.

The fundamental competencies described in Category 1 are applicable to all other categories described in this competency profile. During the development and review of this document, regional differences, requirements and legislation were taken into consideration. It is recognized that immediate supervision of the work performed by MLAs differs across the country.

General Statements

The Medical Laboratory Assistant:

1. Takes responsibility and is accountable for his/her professional actions.
2. Seeks help and guidance to enhance his/her level of competence.
3. Discusses procedures with patients in order to facilitate informed consent and respects a patient's right to refuse treatment.
4. Exercises a judicious approach to the right to refuse to participate in potentially dangerous situations.
5. Complies with legislation governing medical laboratory science and applies the legislation to the practice of the profession.
6. Provides for the health care needs of the public, keeping welfare and confidentiality of the patient paramount at all times, and respecting the dignity, values, privacy, and beliefs of the individual.
7. Identifies learning needs and participates in continuing education and training.
8. Keeps abreast of new laboratory procedures and research, and shares new knowledge with colleagues.
9. Demonstrates the ability to adapt to rapidly changing situations, e.g. responds appropriately to critical situations; retains composure in stressful situations; applies existing skills to new situations.
10. Builds upon current knowledge to facilitate the acquisition of new knowledge from other health professionals.
11. Acts in a professional manner by demonstrating effective communication techniques, interpersonal skills and conflict resolution methods.
12. Recognizes how ethical issues in health care environments affect the MLA.
13. Demonstrates an attitude of inquiry by being open to new ideas and receptive to change.
14. Promotes the image and status of the profession of medical laboratory science by maintaining standards of practice.
15. Represents the laboratory service in a professional manner, in both appearance and personal hygiene.
16. Promotes an awareness and understanding of the contribution that the MLA provides to the client/patient and the public.

COMPETENCY CATEGORIES

1. Fundamental Competencies	Applies fundamental competencies in the performance of tasks assigned.
2. Safe Work Practices	Conducts professional practice according to established protocols, safety guidelines, and existing legislation.
3. Communication and Interaction	Interacts in a professional and competent manner, using effective listening, verbal and written communication in dealing with laboratory colleagues, patients, clients and other health professionals. The medical laboratory assistant projects a professional image and follows generally accepted practices regarding interactions with clients, patients and colleagues.
4. Data Entry and Specimen Procurement/Receipt	Verifies relevant data and ensures that appropriate specimens are procured according to established protocols.
5. Specimen Processing	Processes specimens from a variety of sources according to established protocols.
6. Pre-analytical Procedures	Performs pre-analytical procedures on specimens from a variety of sources according to established protocols.
7. Reagent/Media Preparation	Prepares reagents for medical laboratory testing using approved methods and according to laboratory standards and established procedures.
8. Quality Assurance	Follows quality assurance policies, and procedures and participates in quality assurance initiatives.
9. Professionalism	Meets the legal and ethical requirements of practice and protects the patient's right to an established standard of care. Professional responsibility encompasses scope of practice, accountability, and professional development.

Category 1¹
Fundamental Competencies

The medical laboratory assistant applies fundamental competencies in the performance of tasks assigned and within the scope of the MLA profession.

Number	Competency
1.01	Correctly identifies patient/specimen, maintaining confidentiality
1.02	Utilizes office equipment for data storage, retrieval, communication and research, e.g. fax, photocopier, computers
1.03	Applies fundamentals of medical terminology, physiology, anatomy, disease processes and infection control to perform tasks in a safe and appropriate manner

¹ Old competency 1.04 was deleted, as it is covered in new competency 9.05.

Category 2
Safe Work Practices

The medical laboratory assistant conducts professional practice according to established protocols, safety guidelines, and existing legislation.

Number	Competency
2.01	Applies the principles of standard precautions
2.02	Uses personal protective equipment correctly, e.g. gloves, gowns, masks, face shields, aprons
2.03	Applies appropriate laboratory hygiene and infection control practices
2.04	Minimizes possible dangers from biological specimens, laboratory supplies, and equipment
2.05	Utilizes available laboratory safety devices in a correct manner, e.g. fume hoods, biosafety cabinets, safety pipetting devices
2.06	Applies WHMIS and existing legislation to the labeling, dating, handling, storing and disposal of chemicals, dyes, reagents and solutions
2.07	Handles and disposes of “sharps” according to safety guidelines
2.08	Selects and utilizes the appropriate method for items to be disinfected and/or sterilized
2.09	Responds to incidents such as chemical injury, traumatic injury, needle stick injury electrical shock, burns, patient collapse, e.g. first aid
2.10	Applies spill containment and clean up procedures for infectious materials and dangerous chemicals
2.11	Responds appropriately to all emergency codes
2.12	Reports incidents related to safety and personal injury (e.g. needle stick injury, chemical splash) in a timely manner
2.13	Applies occupational health and safety guidelines with respect to electrical, radiation, biological and fire hazards

Category 3
Communication and Interaction

The medical laboratory assistant interacts in a professional and competent manner, using effective listening, verbal and written communication in dealing with laboratory colleagues, patients, students, clients, and other health professionals. The medical laboratory assistant projects a professional image and follows generally accepted practices regarding interactions with clients, patients and colleagues.

Number	Competency
3.01	Identifies and recognizes clients/patients (internal and external), e.g. patients, physicians, technologists, nurses, pathologists and other lab personnel
3.02 ²	Demonstrates effective communication skills <ul style="list-style-type: none"> ▪ Exchanges information with colleagues, patients, students, clients and other health professionals ▪ Uses effective verbal communication ▪ Writes clearly and concisely ▪ Uses technology appropriately to facilitate communication ▪ Identifies barriers to effective communication ▪ Recognizes other forms of non-verbal communication, e.g. gestures
3.03	Demonstrates the ability to work effectively as part of a team
3.04	Promotes interdisciplinary collaboration in dealing with other health professionals
3.05	Demonstrates basic patient care skills relevant to the laboratory professional <ul style="list-style-type: none"> ▪ Recognizes common indicators of patient stress ▪ Initiates follow-up procedures where necessary for patient well-being ▪ Demonstrates adaptive skills in dealing with patients with varying levels of acuity
3.06	Anticipates, contributes to, responds to, and effectively works in a changing environment
3.07	Demonstrates effective time management
3.08	Practices effective communication with colleagues, patients, students, clients, and other health professionals while maintaining a professional attitude

² 3.02 - Reworded

Category 4

Data Entry and Specimen Procurement/Receipt

The medical laboratory assistant verifies relevant data and ensures that appropriate specimens are procured according to established protocols.

Number	Competency
4.01	Ensures required information is on the request for service, e.g. requisition or pre-accessioned label
4.02	Procures and labels laboratory specimens according to procedural requirements <ul style="list-style-type: none">▪ Selects appropriate equipment/supplies, e.g. needle type/gauge, specimen container▪ Verifies labeling is complete
4.03 ³	Performs venipuncture and capillary blood collection to obtain appropriate samples for laboratory analysis <ul style="list-style-type: none">▪ Confirms the identity of the patient▪ Establishes a professional relationship with the patient▪ Provides the necessary information for the patient to understand the specimen collection procedure▪ Obtains consent from the patient to proceed with specimen collection▪ Follows proper procedures and techniques to minimize discomfort to the patient
4.04	Instructs patient in collection, storage and transport of specimens, e.g. mid-stream urine, 24-hour urine, stool for occult blood
4.05	Follows protocol for procurement of specimens with legal/industrial implications and ensures chain of custody is maintained, e.g. blood alcohol, urine drug testing
4.06	Collects, labels and delivers specimens in a safe and timely manner, taking into account specimen priority and stability
4.07	Registers specimen information into laboratory information system, e.g. manual, electronic
4.08	Verifies specimen suitability, including adequate amount/volume and integrity
4.09	Complies with existing guidelines for specimen storage, retention and disposal
4.10	Reports errors in specimen procurement to initiate corrective action

³ 4.03 - Sub-points changed to bullet formatting

Category 5 Specimen Processing

The medical laboratory assistant processes specimens from a variety of sources according to established protocols.

Number	Competency
5.01 ⁴	Receives specimens <ul style="list-style-type: none"><li>▪ Validates information according to requisition, specimen, tracking sheets and accepts/rejects specimen based on laboratory specimen acceptance policy<li>▪ Verifies that specimens have been properly packaged for transport
5.02 ⁵	Follows established procedures to process specimens, e.g. centrifuges, aliquots, adds preservatives <ul style="list-style-type: none"><li>▪ Identifies suitability of specimen post-processing and responds appropriately, e.g. presence of fibrin clots, hemolysis or lipemia
5.03 ⁶	Prepares specimens for transfer to testing site or referral centre by ground <ul style="list-style-type: none"><li>▪ Prepares documentation, packages specimens for shipping, seals and labels shipping container, e.g. Transportation of Dangerous Goods (TDG) regulations

⁴ 5.01 - Sub-points changed to bullet formatting

⁵ 5.02 - Sub-points changed to bullet formatting

⁶ 5.03 - Sub-points changed to bullet formatting

Category 6
Pre-analytical Procedures

The medical laboratory assistant performs pre-analytical procedures on specimens from a variety of sources according to established protocols.

Number	Competency
6.01	Loads specimens for analysis on automated and semi-automated equipment
6.02	Prepares hematology and microbiology smears either manually or using automated equipment
6.03	Performs routine hematology, microbiology and histotechnology staining procedures either manually or using automated stainers , e.g. Jenner - Giemsa, Gram, Wright, Hematoxylin and Eosin <ul style="list-style-type: none"> ▪ Mounts slides
6.04 ⁷	Selects appropriate culture media, inoculates (plates/plants), and incubates microbiology specimens using manual and/or automated systems
6.05 ⁸	Prepares specimens for histology, i.e. specimen accessioning and tissue cassette labelling – automated and/or manual <ul style="list-style-type: none"> ▪ Performs routine tissue processor maintenance and reagent changes ▪ Files and retrieves stained slides and paraffin blocks
6.06 ⁹	Prepares specimens for cytology - automated and/or manual <ul style="list-style-type: none"> ▪ Prepares gynecological and non-gynecological specimens ▪ Stains and mounts slides, e.g. Papanicolaou

⁷ 6.04 - Rearranged order of competency

⁸ 6.05 - Sub-points changed to bullet formatting

⁹ 6.06 - Sub-points changed to bullet formatting

Category 7

Reagent/Media Preparation

The medical laboratory assistant prepares reagents/media using approved methods and equipment for medical laboratory testing according to standards and established procedures.

Number	Competency
7.01 ¹⁰	Prepares stains, stock solutions, working solutions, and media <ul style="list-style-type: none"><li>▪ Performs simple calculations/dilutions for reagent preparation
7.02	Reconstitutes reagents according to manufacturer's specifications
7.03	Cleans glassware
7.04	Utilizes reagent preparation equipment, e.g. pH meter, balance, autoclave

¹⁰ 7.01 - Sub-points changed to bullet formatting

Category 8
Quality Assurance

The medical laboratory assistant follows quality assurance policies and procedures and participates in quality assurance initiatives.

Number	Competency
8.01	Maintains laboratory equipment as required <ul style="list-style-type: none"> ▪ Completes necessary documentation
8.02 ¹¹	Applies quality assurance principles, <ul style="list-style-type: none"> ▪ Follows procedures ▪ Initiates corrective action as required ▪ Documents appropriately, e.g. monitoring refrigerator temperature, incubators, dry baths
8.03 ¹²	Monitors supplies for expiry dates and lot numbers <ul style="list-style-type: none"> ▪ Ensures stock rotation ▪ Orders and restocks supplies based on usage and requirements
8.04	Assists in updating procedures and protocols, as well as other reference information and communication
8.05	Participates in workflow analysis to identify issues and solve problems

¹¹ 8.02 - Reformatted competency - bullet format

¹² 8.03 - Reformatted competency - bullet format

Category 9
Professionalism

The medical laboratory assistant meets the legal and ethical requirements of practice and protects the patient's right to the established standard of care. Professional responsibility encompasses scope of practice accountability and professional development.

Number	Competency
9.01	Participates in providing for the health care needs of the public, keeping the welfare and confidentiality of the patient paramount at all times, and respecting the dignity, values, privacy and beliefs of the individual.
9.02	Complies with legislation governing the medical laboratory profession
9.03	Recognizes when asked to perform beyond scope of practice or competence and seeks appropriate guidance
9.04	Respects a patient's right to refuse treatment
9.05	Exercises a judicious approach to the right to refuse to participate in potentially dangerous situations
9.06	Takes responsibility and is accountable for professional actions
9.07	Participates in on-going training and continuing education
9.08	Keeps abreast of laboratory techniques and research and shares new knowledge with colleagues
9.09	Promotes the image and status of the profession of medical laboratory science as members of the health care team by maintaining established standards of practice
9.10	Promotes an understanding of the contribution the medical laboratory assistant provides to health care.
9.11	Recognizes how ethical issues in the health care environment affect the medical laboratory assistant
9.12	Demonstrates the ability to adapt to rapidly changing situations, e.g. responds appropriately to critical situations, retains composure in stressful situations, applies existing skills to new situations
9.13	Demonstrates knowledge of the health care system and professional laboratory organizations and responsibilities
9.14 ¹³	Maintains confidentiality of information
9.15	Respects patient dignity and privacy

¹³ 9.04 - formerly competency 3.04

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