

## Laboratory Scientists and Technologists

Occupational Family/Code – Science and Technology: SLS, SLT

Profile created: 1998 04

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<b>Occupation Summary</b>	<b>Selection of Competencies</b>	<b>Knowledge</b>	<b>Skills</b>	<b>Personal Attributes</b>
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Laboratory Technologist/Scientists may be employed in the areas of Medical, Environmental or Veterinary services. They process and analyze specimens, submitted from physicians, veterinarians, industry and private individuals, through the use of laboratory instruments and manual or automated testing methods. While the focus of various jobs may be different, many of their responsibilities are complementary and in some cases are similar.

### Laboratory Technologists

Laboratory Technologists perform a variety of manual and automated laboratory tests on clinical (body fluids and tissues) and environmental specimens, and interpret, record and report results to clients. They operate and maintain scientific analytical instrumentation while adhering to protocols and safety guidelines. Technologists must maintain and troubleshoot instrumentation and procedures for possible sources of error. They monitor quality control materials for proficiency testing and validation of test results. Technologists may also provide direction on test equipment and procedures to co-workers and students.

Technologists may also supervise other technologists/staff and/or be required to take part in such activities as training of staff, evaluating methods, tests or instruments, and writing, reviewing and updating policy and procedure manuals for their areas.

### Laboratory Scientists

Laboratory Scientists and more senior level technologists may also be engaged in research and development, education, and supervision/management of the laboratory. They may evaluate, monitor and select test methods and instrumentation; and develop and manage implementation of new methods and protocols to produce optimum results.

They provide consultation and interpretation to clients regarding significance of test results and the validity of test methods. They provide technical and/or scientific expertise within their respective specialty.



Laboratory Technologists and Laboratory Scientists responsibilities are varied. They may be exposed to infectious biohazard materials, chemicals which may be carcinogenic, or radioactive materials. The physical demands of Laboratory Technologists and Laboratory Scientists are eye strain, sitting or standing for extended periods of time, risk of repetitive muscular strains, extended exposure to equipment noise, and lifting weights up to 30 pounds. Technologists and Scientists may be required to work overtime and receive telephone calls at home. They are required to maintain their level of expertise in learning new tests, methods and protocols, and able to work in an environment of defined time frames or constraints for tests and processes.



## Knowledge

Knowledge is the baseline of information acquired through work and life experiences, learning situations and formal education which enables an individual to perform from an informed perspective.

### Acts/Regulations/ Legislation

- Knowledge of internal and external policies, procedures, regulatory standards and guidelines as they pertain to the laboratory. **(Learn)**
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### Theories/Principles

- Knowledge of scientific terminologies, theories, principles and applied methodologies, relevant to the specific discipline(s). **(Bring)**

(Basic level for all new recruits. Depending on the position, the level, and the specialization, the depth/breadth and specifics of knowledge requirement varies.)

- Knowledge of human resource management practices, including strategies to recruit, support and sustain a diverse workforce. **(Bring - Supervisor only/Learn)**
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### Technical

- Knowledge of laboratory techniques and basic procedures relevant to the scientific disciplines(s). **(Bring)**
- Knowledge of the critical factors that effect the significance and validity of test results. **(Learn)**
- Knowledge of operation and maintenance of scientific laboratory equipment and computerized instrumentation. **(Bring)**

(Bring knowledge of operation and maintenance of basic equipment. Beyond that, the depth, breadth and specifics of the knowledge {advanced, specialized, sophisticated equipment and instruments} will be determined by the level and specialization of the position.)

- Knowledge of computer software and/or hardware applications. **(Bring/Learn)**
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## Skills

Skills are those demonstrated abilities, or proficiencies which one has learned from their past. These are acquired/developed from past work and life experience, including volunteer work, independent study, life events, community and leisure activities, and formal training.

Skills are demonstrable, measurable and are transferable from one situation to another.

### Communication

- Ability to orally and in writing explain or present technical, scientific, medical information in a clear, accurate and understandable manner, at a level appropriate to the audience. **(Bring)**

*Personal attributes which may link with this skill statement include: detail-oriented, flexible...*

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### Leadership

- Ability to lead, encourage, co-operate and advise colleagues to promote and maintain a healthy, positive work environment and achieve client, team and ministerial goals. **(Bring)**

*Personal attributes which may link with this skill statement include: team player, respectful, reasonable...*

- Ability to monitor and verify facts, techniques, processes, results and actions of staff and their environment to ensure compliance with standards, protocols and policies. **(Bring)**

*Personal attributes which may link with this skill statement include: detail-oriented, logical, reasonable...*

- Ability to select, lead, guide, coach and monitor employee performance to enhance their job performance and further develop their skills. **(Bring/Learn)**

*Personal attributes which may link with this skill statement include: flexible, respectful, patient...*



- Ability to guide and coach a diverse group of employees, that results in a team that can meet its goals and objectives, while maintaining a healthy, productive, respectful and safe work environment that is free of discrimination.

**(Bring - Supervisor only/Learn)**

*Personal attributes which may link with this skill statement include: respectful, supportive, empathetic...*

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### Problem Solving

- Ability to identify, clarify and analyze client concerns in order to provide appropriate analyses to meet or satisfy client needs. **(Bring)**

*Personal attributes which may link with this skill statement include: respectful, logical, patient...*

- Ability to detect technical/analytical errors to systematically identify the source of the error and quickly resolve the problem to ensure compliance with standards, protocols and procedures. **(Bring/Learn)**

*Personal attributes which may link with this skill statement include: detail-oriented, logical, focused...*

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### Interpersonal

- Ability to actively listen to acknowledge concerns, provide explanations and/or options to diffuse or resolve difficult situations with people in a calm and courteous manner. **(Bring)**

*Personal attributes which may link with this skill statement include: understanding, patient, reasonable...*

- Ability to create an environment that recognizes, supports, respects and welcomes diversity of employees and clients. **(Bring - Supervisor only/Learn)**

*Personal attributes which may link with this skill statement include: welcoming, objective, understanding...*

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### Team/Independence

- Ability to work independently and participate as a contributing member of a team to achieve individual and common goals to maintain a cohesive work unit. **(Bring)**

*Personal attributes which may link with this skill statement include: team player, flexible, reasonable...*

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### Organizational

- Ability to independently, or as part of a team, assess, plan and adjust work priorities as stat, urgent or routine to meet required objectives, in consideration of deadlines and resource availability. **(Bring)**

*Personal attributes which may link with this skill statement include: respectful, reasonable, flexible...*

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### Analytical

- Ability to accurately compile and monitor quality control and test results for statistical information purposes. **(Bring)**

*Personal attributes which may link with this skill statement include: detail-oriented, focused, logical...*

- Ability to statistically analyze, track and interpret complex technical, scientific data to identify changes in client status and levels, pathogenicity, positivity rates, expenses/revenue, or for quality control, equipment evaluation and comparison studies. **(Learn/Bring)**

*Personal attributes which may link with this skill statement include: logical, focused, detail-oriented...*

- Ability to independently design or conduct research projects to develop, evaluate and/or analyze procedures for studies and/or possible implementation or incorporation, to provide good client service, reduce costs, improve lab efficiency and new technology. **(Learn/Bring)**

*Personal attributes which may link with this skill statement include: trustworthy, logical, focused...*



- Ability to identify interferences/limitations and investigate irregular/abnormal findings in order to accurately interpret, validate and report test results. **(Learn)**

*Personal attributes which may link with this skill statement include: focused, logical, detail-oriented...*

- Ability to identify, recommend (design) and contribute to the development of new methods, ideas and approaches that improve work processes and systems. **(Bring/Learn)**

*Personal attributes which may link with this skill statement include: flexible, optimistic, reasonable, logical...*

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### Technical

- Ability to accurately input, edit, update and retrieve client and statistical information from a database (with speed). **(Bring/Learn)**

*Personal attributes which may link with this skill statement include: focused, detail-oriented...*

- Ability to safely operate and consistently maintain, troubleshoot and calibrate laboratory equipment used in diagnostic and/or analytical testing. **(Bring/Learn)**

*Personal attributes which may link with this skill statement include: logical, patient...*

- Ability to prepare and analyze samples or specimens according to established laboratory protocol to ensure timely, precise, accurate results. **(Bring)**

*Personal attributes which may link with this skill statement include: detail-oriented, logical...*

- Ability to track, monitor and anticipate human resource and program expenses (revenues) to recommend adjustments to budget allocations. **(Learn/Bring)**

*Personal attributes which may link with this skill statement include: reasonable, focused, team player...*

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### Safety/Stress/Security

- Ability to apply the principles of standard precautions and proper laboratory safety practices according to established protocols, safety guidelines and existing legislation to protect self, co-workers, the public and the environment. **(Bring)**

*Personal attributes which may link with this skill statement include: focused, logical, meticulous...*

- Ability to responsibly receive, handle, label, document and store samples to maintain specimen/sample integrity within established guidelines. **(Bring)**

*Personal attributes which may link with this skill statement include: focused, logical, meticulous...*

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## Personal Attributes

### (Bring)

Personal Attributes identify qualities of character, which a person must have to be an effective and successful performer in the job. They are underlying characteristics which are deep and enduring parts of an individual expressed most of the time. They are one's personal style or personal effectiveness, such as feelings, attitudes, habits and traits. Each of these is demonstrated by behavioural examples which allow one to objectively determine whether an individual possesses the required personal attributes.

Attributes, together with the knowledge and skill competencies, help you to predict what a person will do in a given situation.

### Personal attributes for the Laboratory Technologists and Laboratory Scientists include:

#### To Be...

- detail-oriented/  
meticulous
- focused/ multi-task  
oriented
- team player/ co-  
operative
- trustworthy/ reliable
- objective
- logical/ self-analytical/  
systematic/ observant
- optimistic/ motivated/  
positive/ independent
- flexible/ open-minded
- discrete/ tactful
- welcoming
- supportive
- patient/ calm
- reasonable
- respectful
- understanding/  
empathetic/ sincere
- accommodate  
individual differences
- equitable

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