

Laboratory Technician

National Occupational Standard Summary



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Definition of occupation | **Laboratory Technician**

The Laboratory Technician is employed in various bio-economy laboratories including research and development (R&D), quality control, and quality assurance laboratories. They perform “on-the-bench” tasks and follow laboratory procedures (applying basic scientific and laboratory concepts and theories related to the specific testing that is appropriate to their scope of work) under the supervision of laboratory researchers, research scientists, and other senior staff.

The Laboratory Technician assists and supports laboratory processes in compliance with good laboratory practices (GLP) and required ISO standards. They may also participate in the development of workflows and standard operating procedures (SOPs) related to the work being performed.

The Laboratory Technician must adhere to industry and workplace policies and health and safety standards when carrying out their work. They may occasionally supervise or oversee the work of other laboratory staff.

The Laboratory Technician can be employed under a variety of job titles by companies of different sizes (small, medium, large) and in the four sub-sectors of the bio-economy (Bio-health, Bio-industrial, Bio-Energy and Agri-Biotech).

NOTE: This profile is for a NON-MEDICAL Laboratory Technician.

Level of education, training or designations requirements

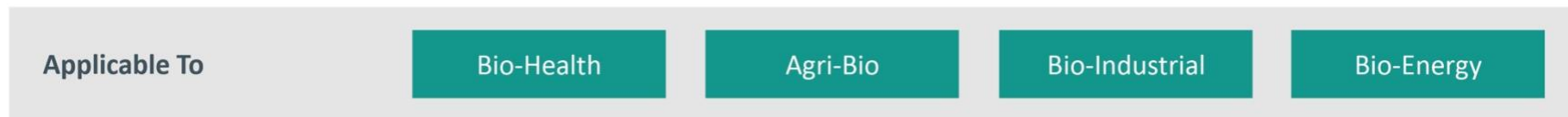
Typical Education Required	Secondary	College	Bachelor	Master	PhD
Typical Starting Experience	0-5 yrs.	5-10 yrs.	10-15 yrs.	15-20 yrs.	20+ yrs.

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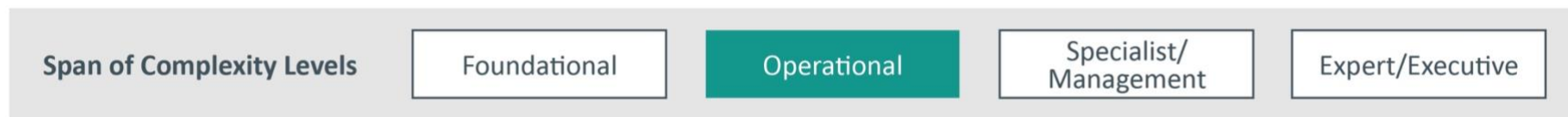
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- Some post-secondary education in related field of study through an accredited training or certificate program is the minimum
- Bachelor of Science in biology, chemistry, biochemistry, or related field may be required, depending on the scope of the role and associated responsibilities
- Experience in biology, biochemistry, or chemistry research (or related experience) is an asset
- Understanding of the Good Laboratory Practices (GLP)/Good Manufacturing Practices (GMP) guidelines, applicable ISO standards, and data integrity is an asset
- Professional certification by the Canadian Society for Medical Laboratory Science (CSMLS) or equivalent provincial certifying body (e.g., Medical Laboratory Professionals' Association of Ontario (MLPAO)) is an asset

This role works in the following subsectors:



The level of complexity of the role is:



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LABORATORY TECHNICIAN COMPETENCY SUMMARY

Competencies	Complexity Level Required			
	1 Foundational	2 Operational	3 Specialist/ Manager	4 Expert/ Executive
Core				
Ethical Behavior				
Teamwork				
Technical				
Quality Control				
Risk Reduction				
Safety and Security Management				
Equipment Management				
Supply and Sample Management				
Application of Scientific Method and Principles				
Reporting of Results				
Industry Regulatory				
See Technical Competencies				
Personal and Professional				
Critical Thinking				
Effective Communication				
Detail Oriented				

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Core competencies

Ethical Behaviour

Conducts their work with integrity and mutual respect in personal and organizational practices in order to ensure personal accountability, maintain confidentiality, and ensure accuracy of test results.

Teamwork

Interacts with supervisors and coworkers by actively participating and contributing to the capability of the team in order to achieve shared goals in a safe and efficient manner.

Technical competencies

Quality Control

Ensures consistent quality of tests, data, results, products, and reports by following policies and procedures relating to equipment use, testing procedures, and quality management, ensuring reproducibility of results.

Risk Reduction

Reduces potential negative impacts of risks within the laboratory by identifying risks and communicating them to management so that risk mitigation plans can be developed and implemented across the laboratory.

Safety and Security Management

Ensures all established SOPs addressing physical and operational safety are followed in order to protect staff and physical assets from injury, damage, and loss during operations.

Equipment Management

Adheres to policies, principles, and SOPs regarding the operation, maintenance, and calibration of laboratory equipment to ensure its optimal performance in order to produce reliable data consistently and safely.

Supply and Sample Management

Follows policies and procedures related to specimen collection, accessing, tracking supply, including storage and maintenance of reference standards (cultures, reagents, etc.), testing, analysis, and disposal in order to ensure integrity of data and results.

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Application of Scientific Methods and Principals

Researches and analyzes information through the application of the scientific method to conduct a systematic investigation to establish facts and principles or to collect information on a subject to produce a result that is reproducible and within acceptable limits by others assessing the same data.

Reporting of Results

Ensures that results are reported accurately and to the correct stakeholders and systems in order to allow confidentiality and effective analysis of the information contained in the report.

Industry regulatory competencies

See Technical Competencies

Personal and professional competencies

Critical Thinking

Analyzes facts through rational, skeptical, unbiased investigation or evaluation of factual evidence in order to constructively form judgment and problem-solve.

Effective Communication

Consistently interacts with stakeholders, utilizing effective communication methodology (clarity, consistency, creativity, content, and connections) to actively transmit and receive relevant information that is consistent with the organizational objectives.

Detail Oriented

Applies mental focus to their duties to ensure that work is accurate and error free and consistently pays attention to detail to ensure consistency of work and results in order to improve decision-making and achieve results or accomplish tasks/objectives.

USE NATIONAL OCCUPATIONAL STANDARDS TO:

- ✓ Build a job description
- ✓ Plan professional development
- ✓ Map career progression and succession planning
- ✓ Benchmark compensation

View the full National Occupational Standards at biotalent.ca/NOS

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