



## POSITION DESCRIPTION

Position Title: Laboratory Technologist: CEA

Division: School of Agriculture & Environment

Classification: Education Assistant 3

Supervisor's Title:

### POSITION SUMMARY

The CEA Laboratory Technologist is responsible for establishing, operating, and continuously improving a specialized growing media laboratory that supports teaching, applied research, and innovation across agriculture, horticulture, and sustainable food systems programs in a controlled environment agriculture setting such as commercial and research greenhouse structures and polytunnels. The role leads laboratory setup, equipment installation and calibration, method development, quality assurance, safety compliance, data management, and daily operations, while providing technical expertise, training, and research support related to physical, chemical, and biological assessment of growing media, composts, peat alternatives, and organic amendments.

### RESPONSIBILITIES AND ACCOUNTABILITIES

- Establish and organize a new growing media laboratory, including layout design, workflow development, equipment installation, and recordkeeping systems.
- Operate, calibrate, maintain, and troubleshoot laboratory instruments used for physical, chemical, and biological testing of growing media and related materials; manage service contracts and vendor relationships.
- Develop, validate, and implement analytical methods and protocols for growing media characterization (e.g., bulk density, porosity, moisture retention), chemical analysis (pH, EC, salinity, nutrient extraction), compost maturity, and evaluation of peat alternatives.
- Write, maintain, and update SOPs for laboratory operations, equipment uses, safety, quality control, and sample handling while maintaining accurate records and document control systems.
- Establish and oversee QA/QC systems to ensure analytical accuracy, data integrity, traceability, and readiness for audits or reviews.
- Manage day-to-day laboratory operations including scheduling, sample processing, inventory control, purchasing, budgeting support, housekeeping, and workflow optimization.
- Ensure compliance with institutional, provincial, and federal health and safety requirements; maintain chemical inventories, SDSs, waste disposal systems, and deliver safety training.
- Maintain laboratory databases and records, review data quality, and prepare summaries and reports supporting teaching, research, and stakeholder needs.

- Provide hands-on support to faculty, students, and researchers for experiments, media formulation, sampling, greenhouse-linked projects, and applied research initiatives.
- Train and supervise students, research assistants, and other users in safe, effective laboratory practices; support curriculum labs, capstone projects, and applied student research.
- Recommend improvements to laboratory methods, workflows, and capacity; share expertise across programs and contribute to the long-term development of laboratory capabilities.
- Other Related Duties as assigned

**KEY RELATIONSHIPS (attach relevant organizational chart(s))**

|                                       |       |
|---------------------------------------|-------|
| ➤ Staff Positions Directly Supervised | 0     |
|                                       | _____ |
| Staff Positions Indirectly Supervised | 0     |
|                                       | _____ |

**KNOWLEDGE, SKILLS, ABILITIES, OTHER**

**QUALIFICATIONS**

- Bachelor of Science (Masters preferred) in relevant areas such as Biology, Botany, Agriculture, Horticulture, Plant Science, Soil Science, etc.
- Strong laboratory management and organizational skills
- Technical expertise in growing media, composts, and soil/media analysis
- Method development, QA/QC, and documentation proficiency
- Commitment to safety, accuracy, and continuous improvement
- Effective communication and instructional skills for training and collaboration

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Employee's Signature

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Date

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Supervisor's Signature

\_\_\_\_\_  
Date