



# Quality Control Analyst

Bio-economy Skills At-a-Glance



Building skills for Canada's bio-economy

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## About BioTalent Canada™

### Helping Canada's Bio-economy thrive globally

Canada is a world leader in biotechnology—the application of living organisms to industrial, agricultural, medical and other processes and products. To maintain and build on this leadership, the sector needs highly skilled, job-ready people.

By acting as a national hub and central resource for employers, job seekers, students, educators and government agencies, BioTalent Canada helps make this happen.

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## About the Bio-economy

The bio-economy involves the research, development, manufacturing and commercialization of technologies and products for such areas as:

- Agriculture
- Aquaculture
- Bioenergy
- Bioinformatics
- Bioproducts
- Biosciences
- Environment
- Food Processing
- Forestry
- Genomics
- Human and Animal Health
- Industrial
- Life Sciences
- Medical Devices
- Natural Resources
- Nanotechnology
- Nutraceuticals
- Pharmaceuticals

## Components of the Bio-economy Skills At-a-Glance

The *Bio-economy Skills At-a-Glance* are built around *Key Competencies*. They are not complete *Bio-economy Skills Profiles*. They capture the key hard and soft skills required to successfully function in this position. Those key competencies require specific tasks be accomplished in order to attain the desired outcome. More often than not, those key activities are functional in nature and require the application of specific knowledge acquired by education, training or practical experience. In bio-economy companies, those functional competencies may be very broad and diversified, encompassing both scientific and business expertise. Some may refer to functional competencies as hard skills of the position.

The *Bio-economy Skills At-a-Glance* have been developed through secondary research and have NOT been validated by industry. As a result, industry feedback will be greatly appreciated. Please send any feedback to [portfolios@biotalent.ca](mailto:portfolios@biotalent.ca).

The *Bio-economy Skills-At-a-Glance* are useful for such activities as recruiting, professional development, coaching, self-assessment, and many other purposes.

## Occupational Description

A quality control analyst monitors and conducts routine and non-routine tests on the raw materials and products at various stages of manufacturing. They are often involved in revising and creating new SOPs to deal with new equipment or manufacturing methods within the laboratory or manufacturing facility. A quality control analyst will compile data, reviewing it for abnormalities, which if identified are reported the appropriate parties within the required deadlines.

## Potential Professional Background and Education/Bio-economy or Relevant Experience

### Education/Certification

- University Degree in scientific field.
- Senior positions may require an advanced degree.

### Professional Experience

- 0 – 4 years relevant experience.
- 3 – 7 years relevant experience may be required for senior positions.
- Experience in microbiology, chemistry or biochemistry.
- Experience with quality control systems.

## Competencies and Tasks

*A Quality Control Analyst must be able to:*

### A. Gather information

TASKS
1. Assist in performing experimental procedures
2. Perform experimental procedures
3. Use Material Safety Data Sheets (MSDS)
4. Perform analytical testing
5. Research and report on new technologies, processes, regulations and legislation
6. Review production information reports / shift logs

TASKS
7. Assist with monitoring and compliance activities

***B. Analyze data and information***

TASKS
1. Perform mathematical calculations
2. Analyze data
3. Analyze non-conformances
4. Interpret and analyze test and measurement data
5. Assess the accuracy of investigation information collected

***C. Plan work***

TASKS
1. Collect samples for analysis
2. Receive, log-in and distribute samples for further analysis
3. Prepare samples for analysis
4. Prepare test media and supplies
5. Produce specialized test media
6. Prepare reagents, solutions and standards
7. Set up to conduct tests and laboratory analysis

***D. Perform testing procedures***

TASKS
1. Perform sampling, inspection and physical testing on raw material samples
2. Perform sampling, inspection and physical testing on in-process/investigational samples
3. Perform sampling, inspection and physical testing on finished product samples
4. Diagnose faults using pneumatic, electrical and electronic testing devices
5. Perform validations on machinery and equipment

***E. Determine compliance with standards***

<b>TASKS</b>
1. Perform sampling, inspection and physical testing on in-process/investigational samples
2. Perform verification and validation of QC test methods
3. Perform verification and validation activities on equipment and manufacturing processes
4. Evaluate quality of raw materials, in-process materials and finished goods
5. Determine conformance to accepted specifications for a particular chemical or physical property
6. Perform annual product quality reviews (APQRs)

***F. Maintain electronic equipment and instruments***

<b>TASKS</b>
1. Maintain instruments and apparatus according to established procedures
2. Identify calibration requirements
3. Calibrate components and instruments
4. Ensure repair of malfunctions as required

***G. Comply with policies and procedures***

<b>TASKS</b>
1. Contribute to the development of policies and procedures
2. Develop policies and procedures
3. Develop work instructions
4. Maintain policies and procedures
5. Develop quality manuals
6. Maintain and update quality manuals
7. Implement policies and procedures
8. Implement quality standard procedures
9. Apply analytical test methods and techniques
10. Follow current Good Manufacturing Practices (cGMP)
11. Promote compliance with appropriate standards, regulatory and legislative requirements

***H. Report information***

TASKS
1. Prepare technical reports
2. Record production information for production reports / maintain shift log
3. Prepare quality-control reports

***I. Perform administrative duties***

TASKS
1. Procure materials and supplies
2. Record expenses incurred
3. Manage complaints, non-conformances and change control systems

***J. Use computers***

TASKS
1. Use email software as appropriate
2. Use Microsoft Office as appropriate
3. Use database software as appropriate
4. Use statistical analysis software as appropriate
5. Use ERP (SAP) computer software as appropriate
6. Use laboratory information management systems (LIMS) as appropriate
7. Use intranet as appropriate
8. Use the Internet as appropriate

***K. Demonstrate personal competencies***

TASKS
1. Demonstrate teamwork
2. Exhibit sensitivity to cultural and social diversity
3. Be customer service focused
4. Work in a fast-paced environment



TASKS
5. Follow company's policies and procedures
6. Demonstrate time management skills
7. Manage stress
8. Be a quick learner
9. Communicate effectively and clearly

## Strong Board of Directors

The Board of Directors is composed of experts in the field of HR, CEOs, CFOs and CSOs from across Canada with extensive financial and industry experience representing companies and organizations in Canada's bio-economy. BioTalent Canada is not a membership organization and therefore relies on the guidance provided by its dedicated volunteer Board of Directors.

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