



## **INTERNATIONAL EDUCATED CHEMIST WORKING AS A CHEMICAL TECHNICIAN/TECHNOLOGIST**

### **OVERVIEW**

Chemical technologists and technicians provide technical support and services or may work independently in chemical engineering, chemical and biochemical research and analysis, industrial chemistry, chemical quality control and environmental protection.

A chemical technician uses laboratory instruments and techniques to assist chemists and chemical engineers in researching, developing, producing and testing chemical products and processes. They conduct analytical or lab-based tests on a variety of chemicals, materials or products. They conduct testing for the purposes of environmental impact, quality assurance, regulatory adherence, safety inspection, or sample testing. The main duties of a chemical technician involve processing chemicals and completing chemical orders which can range from a complicated processing request to a simple job. They document the process used, the values recorded at different stages, and any issues they come across. This information is reviewed to maintain quality control.

Chemical technicians focus their career on a specific area, specializing in a specific industry or type of technology such as analytical chemistry, production of industrial chemicals, materials science, food technology, mineral processing, pulp and paper technology, recycling technology, industrial chemistry, or environmental monitoring and protection.

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### **EDUCATION, TRAINING AND QUALIFICATIONS**

Chemical technologists usually require completion of a two- or three-year college program in chemical, biochemical or chemical engineering technology or a closely related discipline.

Chemical technicians usually require completion of a one- or two year college program in chemical, biochemical or chemical engineering technology

A period of supervised work experience, usually two years, is required before certification.

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## EMPLOYMENT AREAS

Chemical technicians are employed by research and development and quality control laboratories, consulting engineering companies, in chemical, petrochemical, pharmaceutical and a variety of other manufacturing and processing industries, and by utilities, health, education and government establishments.

Chemical technicians/technologists are also referred to as a Chemical Laboratory Technician, Chemical Research Tech, Chemical Laboratory Technologist or Chemical Tech.

## JOB RESPONSIBILITIES

**Chemical technicians/technologists perform some or all the following duties:**

- Set up and conduct chemical experiments, tests and analyses using techniques such as chromatography, spectroscopy, physical and chemical separation techniques and microscopy
- Operate and maintain laboratory equipment and apparatus and prepare solutions of gas or liquid, reagents, and sample formulations
- Compile records and interpret experimental or analytical results
- Develop and conduct programs of sampling and analysis to maintain quality standards of raw materials, chemical intermediates and products
- Assist in the development of processes and the development of standards, procedures and health and safety measures
- Operate experimental chemical or petrochemical pilot plants
- Conduct or assist in air and water quality testing and assessments, environmental monitoring and protection activities, and development of and compliance with standards
- Assist in synthesis of small molecules for the purpose of creating drug candidates
- Assist in the design and fabrication of experimental apparatus.
- Assist in setting up and conducting chemical experiments, tests and analyses
- Operate and maintain laboratory equipment and apparatus and prepare solutions of gas and liquid, reagents and sample formulations
- Compile records for analytical studies

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- Assist in developing and conducting programs of sampling and analysis to maintain quality standards
- Carry out a limited range of other technical functions in support of chemical research, tests and analyses, and environmental air and water quality monitoring and protection
- Assist in the design and fabrication of experimental apparatus.

## **CERTIFICATION WITH CANADIAN SOCIETY FOR CHEMICAL TECHNOLOGY (CSCT)**

Some employers will give preference to individuals who are certified. Broader certification is also available for technicians or technologists working in applied science-technology fields such as bio-medical engineering, environmental, information, and mechanical disciplines, and other areas related to the built and natural environment.

The [Canadian Society for Chemical Technology \(CSCT\)](#) is a national, not-for-profit, professional association that unites chemical technology students and professionals who work in industry, academia and government. The CSCT is one of the three Constituent Societies of the [Chemical Institute of Canada \(CIC\)](#). The other two societies are the [Canadian Society for Chemistry \(CSC\)](#) and the [Canadian Society for Chemical Engineering \(CSE\)](#).

A [membership application](#) with CSCT is completed online and criteria for membership eligibility can be found in Section 111 Members (3.01) of the society [bylaws](#). CIC provides a number of different [professional designations](#).



## RESOURCES

Alternate Careers - <https://altcareers.csmls.org/careers/chemical-technologist/>

Canadian Council Technicians and Technologists (CCTT) - <https://www.cctt.ca/disciplines/chemical>

Canadian Society for Chemistry (CSC) – <https://www.cheminst.ca/about/about-csc/>

Canadian Society for Chemical Engineering (CSChE) – <https://www.cheminst.ca/about/about-csche>

Canadian Society for Chemical Technology (CSCT) - <https://www.cheminst.ca/about/about-csct/>

Career Explorer - <https://www.careerexplorer.com/careers/chemical-technician/>

Chemical Institute of Canada (CIC) - <https://www.cheminst.ca/>

Government of Canada - <https://www.jobbank.gc.ca/marketreport/summary-occupation/2934/ca>

## JOB BOARDS

Indeed.ca (Includes Quality Assurance positions)- <https://ca.indeed.com/Chemical-Technician-jobs-in-Vancouver,-BC>

Simply Hired - <https://www.simplyhired.ca/search?q=chemical+technician>

Workopolis - <https://www.workopolis.com/jobsearch/chemical-technologist-jobs?job=J6CSkVtvVLrJOoJPOLjKpVyRGKxlrPARo0hl3fhsBTxv5Kj03QLBmA>

Wow Jobs - [https://www.wowjobs.ca/BrowseResults.aspx?q=Chemical+Technologist&s=r&l=BC&job=qL\\_chgbDRZjX80Yz5FU6M-ZtapR29ICPXFDC03ek8gDOKKHrmbjllg](https://www.wowjobs.ca/BrowseResults.aspx?q=Chemical+Technologist&s=r&l=BC&job=qL_chgbDRZjX80Yz5FU6M-ZtapR29ICPXFDC03ek8gDOKKHrmbjllg)

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