

Chemists

A guide for newcomers to British Columbia



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1. Working as a Chemist

[NOC 2021: 21101 / NOC 2016: 2112]

Job Description

Chemists:

- conduct research and analysis in support of industrial operations, product and process development, quality control, environmental control, medical diagnosis and treatment, biotechnology, nanotechnology and other applications
- conduct theoretical, experimental and applied research into basic chemical and biochemical processes to create or synthesize new products and processes

Chemists perform some or all of the following duties:

- Analyze, synthesize, purify, modify and characterize chemical or biochemical compounds
- Develop and conduct programs of analysis to ensure quality control of raw materials, chemical intermediates or final products
- Conduct programs of sample and data collection and analysis to identify and quantify environmental toxicants
- Conduct research to develop new chemical formulations and processes and devise new technical applications of industrial chemicals and compounds

- Conduct research to discover, develop, refine and evaluate new products such as those used in nanomedicine, nanoelectronics and other applications of chemistry
- Conduct fundamental and applied research into the synthesis and properties of chemical compounds and the mechanisms of chemical reactions
- Investigate chemical aspects of the mechanisms of drug action, the diagnosis and treatment of disease, organ function and the assessment of health
- Act as technical consultant in a particular field of expertise
- May participate in the commercialization of new products
- May supervise other chemists and chemical technicians and technologists

Source: National Occupational Classification <https://noc.esdc.gc.ca/>

Industry Overview

Chemistry fuels the Canadian economy. Canada's \$64-billion chemistry industry transforms raw materials into the building blocks needed to manufacture the 70,000 products that ensure our quality of life. From wind turbines and solar panels, to vehicles and electronics, to textiles, building materials, paper and pharmaceuticals, chemistry is vital to the Canadian economy.

Chemistry is directly responsible for 78,500 jobs and is the 3rd largest manufacturing sector in Canada.

Source: Chemistry Association of Canada CIAC

<https://canadianchemistry.ca/resource/2022-economic-review-of-chemistry/>

Job Outlook in BC - Chemists

Expected Job Openings (2022-2032)

540

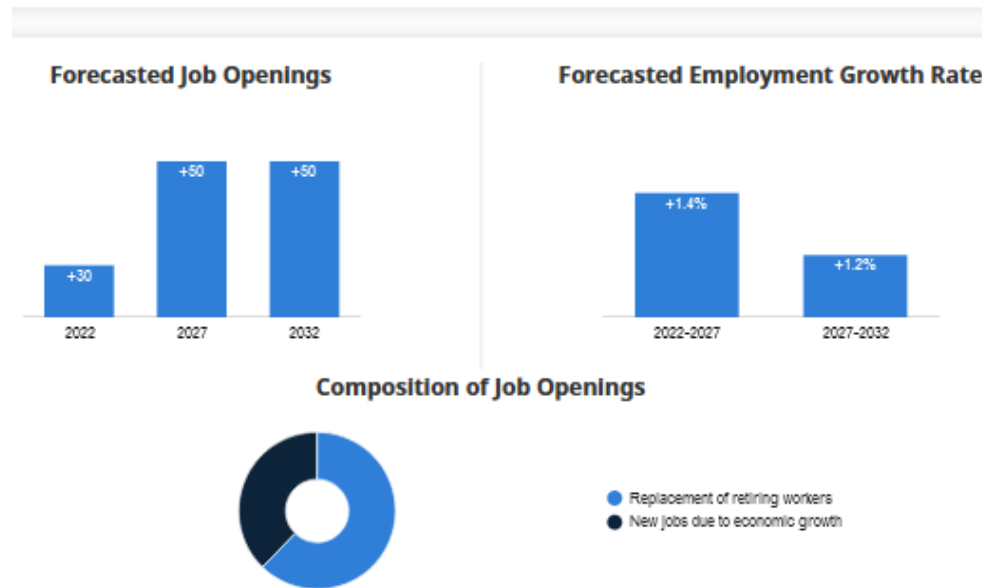


Chart from WorkBC

There are currently 1,200 people working as Chemists in BC. Most are employed in the Mainland / Southwest and Vancouver Island / Coast regions of the province.

Employment growth, 2022-2032:

Region	Job Openings	Avg Annual Employment Growth
Mainland/Southwest	430	1.3%
Vancouver Island/Coast	90	1.9%

You can learn more about working as a chemist in BC from:

- **WorkBC Career Profiles**
<https://www.workbc.ca/career-profiles/chemists>
- **Career Cruising Database – Profile for Chemist**
<https://www.vpl.ca/digital-library/career-cruising>
Available from the VPL Digital Library | Explore our Digital Library page
- **What is a Chemist’s Job Like? University of British Columbia**
<https://chem.ubc.ca/what-chemists-job>

Types of Employers

Chemists are employed in:

- research, development and quality control laboratories
- chemical, petrochemical and pharmaceutical industries
- mineral, metal and pulp and paper industries
- manufacturing, utility, health, educational and government establishments

Salary

In BC, the median annual salary for chemists is \$70,180. The provincial hourly rate ranges from \$25.00 to \$76.00.

Some large drug companies pay very high salaries to chemists who have specialized skills that are in high demand, such as those involved in cancer drug research. Full-time chemists generally receive benefits in addition to a salary. These may include dental coverage, paid vacation and sick days, and contributions to a retirement plan.

Sources: WorkBC and Career Cruising

In BC regions, you can expect to earn:

Community/Area	Low (\$/hour)	Median (\$/hour)	High (\$/hour)
British Columbia	25.00	33.65	74.36
Lower Mainland–Southwest Region	25.00	33.65	74.36

Source: Job Bank Canada <https://www.jobbank.gc.ca/trend-analysis/search-wages>

Working Hours

Most chemists have regular work hours and work a 5-day, 40-hour week. Longer hours may sometimes be necessary to complete important projects and research before a deadline.

Source: Career Cruising

2. Skills, Education and Experience

Skills

- Excellent numerical ability
- Very detail oriented
- Strong innovative thinking and problem solving skills
- Good spatial perception
- Teamwork

Education and Experience

- Bachelor's degree in chemistry, biochemistry, or a related discipline is required
- Master's or doctoral degree is usually required to work as a research chemist
- Licensing by the provincial association of chemists is voluntary in British Columbia

Qualifications

The profession of chemist is **not regulated** in British Columbia.

Licensing Requirements for Chemists

Although the profession of chemist is not regulated in British Columbia, only members of the **Association of the Chemical Profession of British Columbia (ACPBC)** may use the title **Professional Chemist (PChem)**.

Association of the Chemical Profession of British Columbia

<https://www.pchembc.ca/>

- **Membership criteria**

<https://www.pchembc.ca/membership-classes/>

3. Finding Jobs

You'll find job advertisements in local newspapers and electronic sources, as well as through professional associations' publications.

Local Newspapers

You can look at the *Vancouver Sun* & *The Province* at Vancouver Public Library for free. Check the job postings daily and the careers section in the *Vancouver Sun* on Wednesdays and Saturdays and in *The Province* on Sundays.

Online Job Postings

- **ChemistryJobs.com**

<https://www.chemistryjobs.com>

- **Indeed.com**

<https://ca.indeed.com>

Find jobs posted on a multiple of job sites

- **National Research Council of Canada Jobs**

<https://nrc.canada/ca/en>

- **TechJobs.ca**
<https://www.techjobs.ca>
- **BC JobConnect**
<https://www.bcjobconnect.ca> **must have permanent resident number**
newcomers can post their skills, education and work experience to BC employers looking for workers

Professional Associations' Career Resources

- **Association of the Chemical Profession of British Columbia**
<https://www.pchembc.ca/job-postings/>
[membership required to access job postings]
- **Chemical Institute of Canada (CIC) Job Board**
<https://www.cheminst.ca/job-board/>
[membership required]
- **Canadian Society of Molecular Biosciences**
<https://csmb-scbm.ca/jobs/>
Job opportunities for biochemists across Canada

Identifying the Right Position

When you browse job advertisements you'll find a range of different job titles that are relevant.

For chemists, look for these related job titles:

- agrochemist
- biochemist / nanochemist
- clinical chemist
- electrochemist
- environmental chemist
- food chemist
- nuclear magnetic resonance (NMR) spectrometrists
- pharmacological chemist
- quality control chemist

Creating a List of Potential Employers

You can use directories to produce lists of employers who employ chemists in Vancouver or the Lower Mainland. Contact them directly to find out if they're hiring.

- **Business in Vancouver, "Book of Lists"**
Available at the Central Library, 338.9711 B97b
- **Canadian Chemical Directory**
Available at the Central Library, 380 Ch5Cca
- **CIAC Chemistry Industry Association of Canada, Members & Partners**
<https://canadianchemistry.ca/about/members-and-partners/>
- **University Affairs Job Board**
<https://www.universityaffairs.ca/search-job/>
Postings for academic jobs at universities across Canada
- **Reference Canada**
<https://www.vpl.ca/digital-library/reference-canada>
Click on "Start Search" beside Canadian Businesses, then select the "Advanced Search" button. Select both "Keyword/SIC/NAICS" under Business Type and "City" under Geography. In the top search box enter "[Chemical]" and click LOOKUP. Select the appropriate headings. Lower down, select the Province, choose the cities, and click the "View Results" button.
Available from the VPL Digital Library | Explore our Digital Library page

NOTE: *You can access this database from a Library computer. If you are using a computer from outside the Library, you will need a Vancouver Public Library card to login to this database. After clicking on the database name, you will be asked to enter your library card number and PIN (usually last four digits of your telephone number).*

4. Applying for a Job

In Canada, employers usually expect to receive a resume or curriculum vitae and a cover letter that identifies the position you are applying for and summarizes your relevant experience.

Use the library catalogue, <https://vpl.bibliocommons.com/> to find books on writing resumes and cover letters specific to your industry.

To learn about applying for jobs in Canada, use the following guides which are available in print at the Central Library or online at <https://www.vpl.ca/siic/>.

- **Writing Resumes and Cover Letters**
<https://www.vpl.ca/siic/guide/job-search-resources/writing-resumes-and-cover-letters>
- **Getting Canadian Work Experience**
<https://www.vpl.ca/siic/guide/job-search-resources/getting-canadian-work-experience>
- **Networking for Employment**
<https://www.vpl.ca/siic/guide/job-search-resources/networking-for-employment>
- **Learn More About Working in BC and Canada**
<https://www.vpl.ca/siic/guide/job-search-resources/learn-more-about-working-in-bc-and-canada>

5. Getting Help from Industry Sources

Industry Associations

Associations for chemists in BC and Canada provide assistance to individuals. Registration and fees are required for membership.

- **Association of the Chemical Profession of British Columbia (ACPBC)**
<https://www.pchembc.ca/>
- **Canadian Society for Molecular Biosciences**
<https://csmb-scbm.ca/>
- **Canadian Society of Clinical Chemists**
<https://www.csccl.ca/en/>
- **Chemical Institute of Canada (CIC)**
<https://www.cheminst.ca/>

Industry Journals

Search the Vancouver Public Library catalogue for journals related to your profession.

- **Canadian Chemical News**
<https://www.cheminst.ca/news/>
- **Canadian Society of Clinical Chemists – Chemist Library**
<https://www.csccl.ca/en/chemist-library.html>

Questions? Please ask the Information Staff in the Central Library, Vancouver Public Library or telephone 604-331-3603.

Please note that the information in this guide is also available online through the Skilled Immigrant InfoCentre website at <http://skilledimmigrants.vpl.ca/>.