

# Chemists

A guide for newcomers to British Columbia



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## 1. Working as a Chemist

### *Job Description*

Chemists:

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

Chemists perform some or all of the following duties:

- analyze, synthesize, purify, modify and characterize chemical or biochemical compounds
- create and carry out programs of analysis to ensure quality control of raw materials, chemical intermediates or final products
- carry out programs of sample collection, data collection and analysis to identify and measure environmental toxicants
- carry out research to develop new chemical formulations and processes, and devise new technical applications of industrial chemicals and compounds
- carry out research to discover, develop, refine and evaluate new products
- undertake 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

Source:

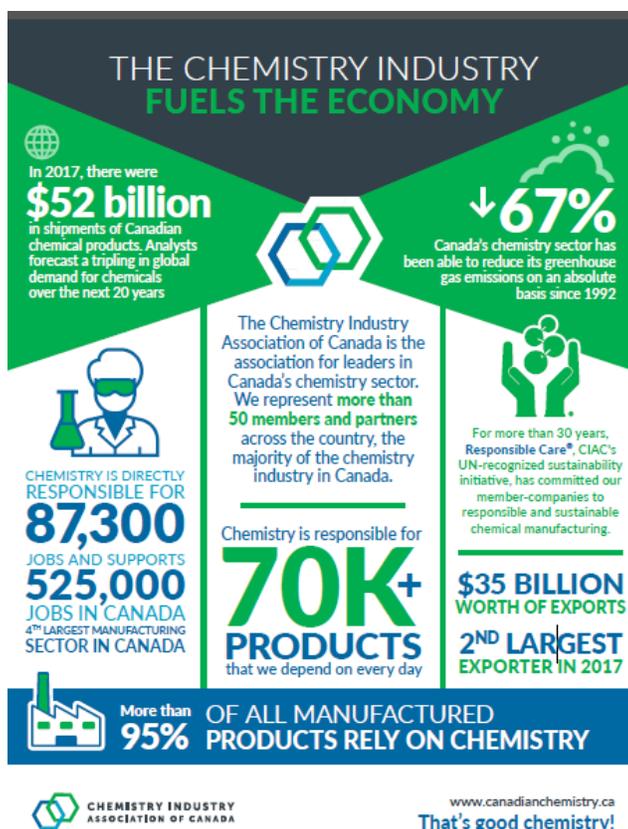
## Industry Overview

Chemistry fuels the Canadian economy. Canada's \$53-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 87,300 jobs and is the 4th largest manufacturing sector in Canada

Source: Chemistry Association of Canada CIAC

<https://canadianchemistry.ca/resources/fact-sheets-infographics/>



**Employment Outlook  
 Chemists, NOC 2112**

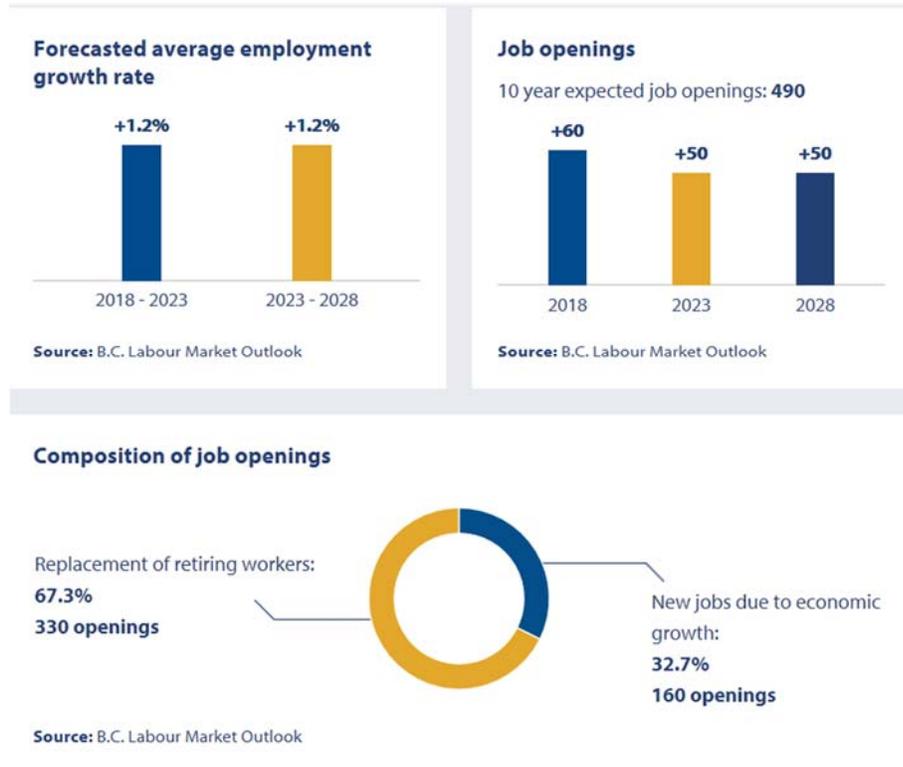


Chart from WorkBC <<http://www.workbc.ca/Job-Seekers/Career-Profiles/2112>>

The Employment Outlook for BC provides the following regional figures:

**Mainland / Southwest**

Employment in 2018: 1,000  
 Average annual employment growth:  
 1.4%  
 Expected number of job openings: 420

**Vancouver Island / Coast**

Employment in 2018: 180  
 Average annual employment growth:  
 0.7%  
 Expected number of job openings: 60

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

- **WorkBC Career Profiles**

<http://www.workbc.ca/Job-Seekers/Career-Profiles/2112>

## ***Types of Employers***

Chemists are employed in:

- work 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 average annual median salary for chemists is \$63,173. However, the provincial hourly rate can range from \$17.00 to \$64.90 for highly trained specialists

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.

Source: Career Cruising <http://www.vpl.ca/digital-library/career-cruising>

Available from the VPL Digital Library | Explore our Digital Library page

Job Bank Canada provides hourly wages for chemists in BC in regions:

Community/Area	Wages (\$/hour)		
	Low	Median	High
<a href="#">Canada</a>	18.75	34.62	57.69
<a href="#">British Columbia</a>	14.57	30.29	66.67

Source: Job Bank <http://www.jobbank.gc.ca/>

## ***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 <http://www.vpl.ca/digital-library/career-cruising>

Available from the VPL Digital Library | Explore our Digital Library page

## **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 a 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**

See website: <http://www.pchembc.ca>

- **Membership criteria**

<http://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.

#### ***Job White Pages***

Available in print at the Central Library or online at

#### **JOB Freeway.com**

<http://www.vpl.ca/digital-library/jobfreewaycom>

Available from the VPL Digital Library | Explore our Digital Library page

**NOTE:** Access at VPL locations only

#### ***Online Job Postings***

- **C&EN Jobs**

<http://chemistryjobs.acs.org/jobs>

- **ChemJobs**

<http://www.chemjobs.net/>

- **Indeed.com**

[http://ca.indeed.com/advanced\\_search](http://ca.indeed.com/advanced_search)

Find jobs posted on a multitude of company career sites and job boards.

- **National Research Council Canada Careers**

<http://www.nrc-cnrc.gc.ca/eng/careers/>

- **New Scientist Jobs**

<http://jobs.newscientist.com>

- **TechJobs.ca**

<http://www.techjobs.ca/en>

- **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***

- **Chemical Institute of Canada (CIC) Career Site**

<http://www.cheminst.ca/career>

- **Canadian Society of Molecular Biosciences**

<http://www.csmb-scbm.ca/jobs.aspx>

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:

- biochemist
- clinical chemist
- coatings chemist
- electrochemist
- environmental chemist
- food chemist
- nuclear magnetic resonance (NMR) spectroscopist
- 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.

- **Association of the Chemical Profession of British Columbia**  
[http://pchembc.ca/member\\_list/](http://pchembc.ca/member_list/)
- **Business in Vancouver, "Book of Lists"**  
Available at the Central Library, 338.9711 B97b or online at  
<http://www.biv.com/lists>
- **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/>

- **Reference Canada**

<http://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, <http://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 pathfinders which are available in print at the Central Library or online at <http://skilledimmigrants.vpl.ca/>.

- **Writing Resumes and Cover Letters**

Go to <http://skilledimmigrants.vpl.ca>

[Search Writing Resumes and Cover Letters]

- **Getting Canadian Work Experience**

Go to <http://skilledimmigrants.vpl.ca>

[Search Getting Canadian Work Experience]

- **Networking for Employment**

Go to <http://skilledimmigrants.vpl.ca>

[Search Networking for Employment]

- **Learn More About Working in BC and Canada**

Go to <http://skilledimmigrants.vpl.ca>

[Search 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)**  
<http://www.pchembc.ca/>
- **Canadian Society for Molecular Biosciences**  
<http://www.csmb-scbm.ca/>

## Chemists

### *A guide for newcomers to British Columbia*

- **Canadian Society of Clinical Chemists**

<http://www.csccl.ca/en/>

- **Chemical Institute of Canada (CIC)**

<http://www.cheminst.ca/>

### ***Industry Journals***

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

- **Canadian Chemical News (accn)**

Available at the Central Library, 660.5 C5178 and online at

<http://www.cheminst.ca/magazine>

- **Canadian Society of Clinical Chemists**

<http://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/>.*