



## WAGE DATA

Rate Type / Statistical Type	Entry level	Mean	Experienced
Annual wage or salary	\$61,477	\$70,159	\$75,900
Hourly wage	\$28.70	\$37.82	\$41.25

## JOB DESCRIPTION

Plan, direct, or coordinate quality assurance programs. Formulate quality control policies and control quality of manufacturing and production efforts.

## DUTIES

- Collect and analyze production samples to evaluate quality.
- Analyze quality control test results and provide feedback and interpretation to production management or staff.
- Stop production if serious product defects are present.
- Monitor performance of quality control systems to ensure effectiveness and efficiency.
- Communicate quality control information to all relevant organizational departments, outside vendors, or contractors.
- Instruct staff in quality control and analytical procedures.
- Produce reports regarding nonconformance of products or processes, daily production quality, root cause analyses, or quality trends.
- Participate in the development of product specifications.
- Review statistical studies, technological advances, or regulatory standards and trends to stay abreast of issues in the field of quality control.
- Identify critical points in the manufacturing process and specify sampling procedures to be used at these points.

## TOOLS and TECHNOLOGY

Tools used in this occupation:

- Laboratory diluters** — Automated diluters
- Notebook computers** — Laptop computers
- pH meters** — pH analyzers
- Spectrometers** — Infrared spectroscopic equipment
- Titration equipment** — Titrators

Technology used in this occupation:

- Analytical or scientific software** — Minitab software; StatGraphics software; Systat Software Lisa.lims; Thermo Fisher Scientific Laboratory Information Management Systems (LIMS) software
- Compliance software** — EtQ Reliance software; MasterControl software
- Database user interface and query software** — Harrington Group caWeb software; Microsoft Access
- Industrial control software** — ASI DATAMYTE GageMetrics; ASI DATAMYTE QDA software; Sparta Systems TrackWise; Vivaldi Software Vivaldi Quality Management Software
- Spreadsheet software** — Microsoft Excel

## KNOWLEDGE

**Administration and Management** — Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.

**Chemistry** — Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.

**Clerical** — Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.

**English Language** — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

**Customer and Personal Service** — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

**Mathematics** — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

**Personnel and Human Resources** — Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.

**Production and Processing** — Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.

**Education and Training** — Knowledge of principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.

**Biology** — Knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment.

## SKILLS

**Quality Assurance Methodology** - LEAN, Six Sigma, etc.

**Reading Comprehension** — Understanding written sentences and paragraphs in work related documents.

**Judgment and Decision Making** — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

**Quality Control Analysis** — Conducting tests and inspections of products, services, or processes to evaluate quality or performance.

**Active Listening** — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

**Monitoring** — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

**Complex Problem Solving** — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

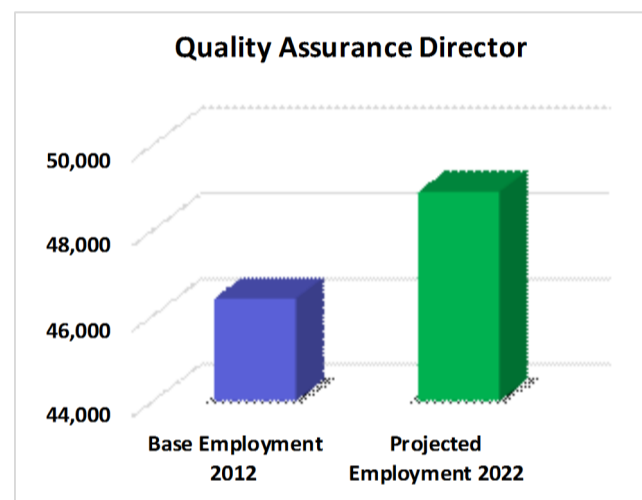
**Critical Thinking** — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

**Speaking** — Talking to others to convey information effectively.

**Time Management** — Managing one's own time and the time of others.

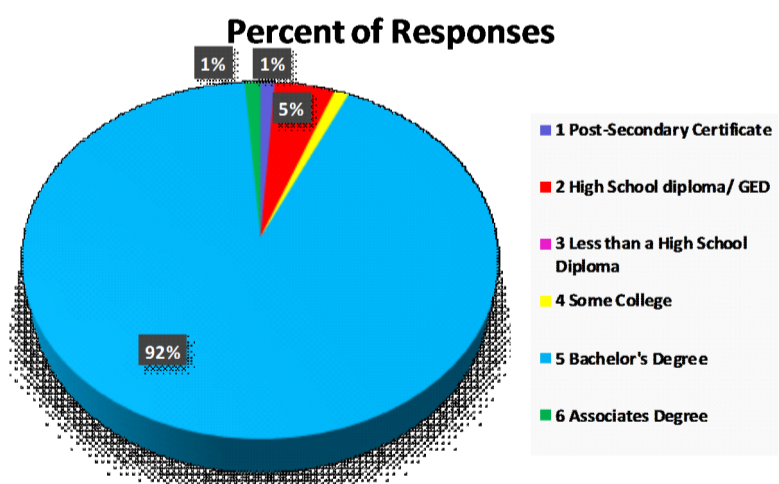
**Writing** — Communicating effectively in writing as appropriate for the needs of the audience.

## EMPLOYMENT PROJECTION



## EDUCATION

The graph below shows the results of a national survey listing the most common required level of education for Quality Assurance Director.



## EDUCATION FOR THIS JOB

- 2014 Catalogue of Colorado Advanced Manufacturing Program and Skill Resources  
<http://www.coloradomanufacturingcareers.com/>
- Approved Colorado Community College Manufacturing Cluster education programs  
<http://www.coloradocommunitycolleges.com/go/programs/skilled-trades-technical-sciences/>  
<http://www.coloradocommunitycolleges.com/go/>
- Colorado Four Year Colleges and Universities  
<http://highered.colorado.gov/academics/colleges/public4year.asp>
- Locations to Get Manufacturing Certificates  
<http://www.coloradomanufacturingcareers.com/>

