



## WAGE DATA

Rate Type / Statistical Type	Entry level	Mean	Experienced
Annual wage or salary	\$28,477	\$39,159	\$45,900
Hourly wage	\$15.70	\$38.82	\$21.25

## JOB DESCRIPTION

Conduct tests to determine quality of raw materials, bulk intermediate and finished products. May conduct stability sample tests.

## DUTIES

- Conduct routine and non-routine analyses of in-process materials, raw materials, environmental samples, finished goods, or stability samples.
- Interpret test results, compare them to established specifications and control limits, and make recommendations on appropriateness of data for release.
- Perform visual inspections of finished products.
- Compile laboratory test data and perform appropriate analyses.
- Complete documentation needed to support testing procedures including data capture forms, equipment logbooks, or inventory forms.
- Calibrate, validate, or maintain laboratory equipment.
- Participate in out-of-specification and failure investigations and recommend corrective actions.
- Supply quality control data necessary for regulatory submissions.
- Receive and inspect raw materials.
- Investigate or report questionable test results.

## TOOLS and TECHNOLOGY

Tools used in this occupation:

**Force or torque sensors** — Force gauges, Torque testers

**Spectrophotometers** — Absorbance spectrophotometers, Fluorescence spectrophotometers

**Tension testers** — Bolt tension meters, Tension meters

**Thickness measuring devices** — Coating thickness gauges, Sonic testers

**Ultrasonic examination equipment** — Ultrasonic flaw detectors, Ultrasonic thickness gauges

Technology used in this occupation:

**Analytical or scientific software** — Laboratory information management system LIMS software, LabWare LIMS, Test automation software

**Database user interface and query software** — dBASE, Microsoft Access, Relational database software, Structured query language SQL

**Program testing software** — Borland SilkTest, Microsoft Visual Studio Test Professional, Parasoft SOAtest, Watir \*

**Spreadsheet software** — Microsoft Excel

**Web platform development software** — Hypertext markup language HTML, JavaScript, Microsoft ASP.NET

## KNOWLEDGE

**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.

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

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

**Computers and Electronics** — Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.

**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.

## SKILLS

**Quality Control Analysis** — Conducting tests and inspections of products, services, or processes to evaluate quality or performance using LEAN and Six Sigma

**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.

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

**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.

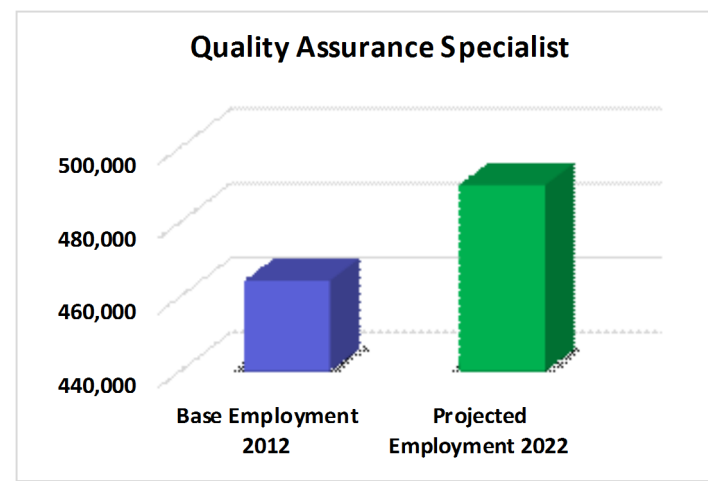
**Judgment and Decision Making** — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

**Operation Monitoring** — Watching gauges, dials, or other indicators to make sure a machine is working properly.

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

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

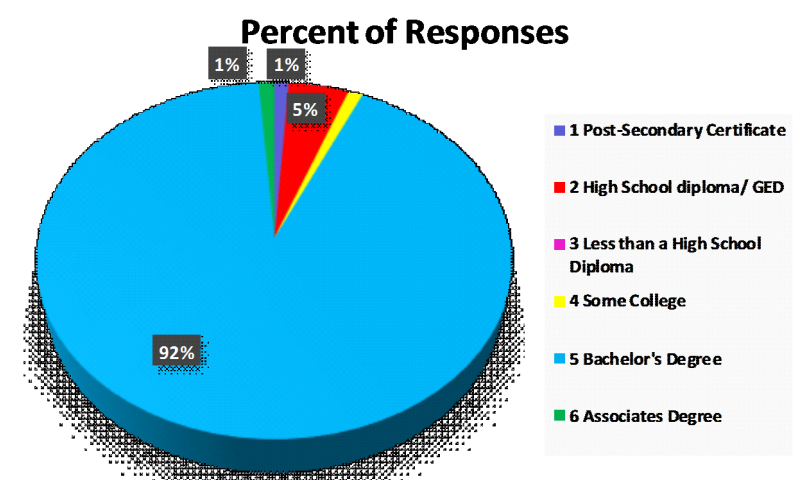
## EMPLOYMENT PROJECTION



This information is based on LMI Gateway Data

## EDUCATION

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



## 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://higherred.colorado.gov/academics/colleges/public4year.asp>
- Locations to Get Manufacturing Certificates  
<http://www.coloradomanufacturingcareers.com/>

