

# Occupational Profile: Chemical Technicians

## GENERAL OCCUPATION DESCRIPTION

Conduct chemical and physical laboratory tests to assist scientists in making qualitative and quantitative analyses of solids, liquids, and gaseous materials for purposes, such as research and development of new products or processes, quality control, maintenance of environmental standards, and other work involving experimental, theoretical, or practical application of chemistry and related sciences.

Source: O\*NET online. <http://online.onetcenter.org>

## REQUIRED EDUCATION

As shown in the table to right, 23% of interviewed employers reportedly require a High School diploma or less, 44% require a two-year degree or the equivalent, and an additional 33% require a four-year degree or more.

Required Education	
Percent of Employers Requiring HS Diploma or Less	22.75%
Percent of Employers Requiring 2-Year Degree or Equiv	43.94%
Percent of Employers Requiring BS Diploma or More	33.32%

Source: Bureau of Labor Statistics

## WAGES

Chemical Technician is considered a medium to high-wage occupation, with good possibility for wage advancement with experience. Employers in Greater Phoenix and the State of Arizona generally pay comparably as compared with the overall United States.

Location	Pay Period	2005				
		10%	25%	Median	75%	90%
United States	Hourly	\$11.37	\$14.41	\$18.51	\$23.44	\$28.17
	Yearly	\$23,600	\$30,000	\$38,500	\$48,800	\$58,600
Greater Phoenix	Hourly	\$11.05	\$13.62	\$17.35	\$21.72	\$29.19
	Yearly	\$22,995	\$28,343	\$36,105	\$45,199	\$60,744
Arizona	Hourly	\$9.95	\$12.82	\$16.17	\$21.72	\$26.58
	Yearly	\$20,700	\$26,700	\$33,600	\$45,200	\$55,300

Source: Bureau of Labor Statistics

As shown in the table to right, a national comparison of wages for this occupation reveals Arizona ranks 38<sup>th</sup> in terms of median wages.

RANK	Location	Median Wage 2005	
		Hourly	Annual
1	Washington	\$23.80	\$49,500
2	Texas	\$22.34	\$46,500
3	Hawaii	\$21.66	\$45,100
4	Louisiana	\$21.54	\$44,800
5	West Virginia	\$20.95	\$43,600
38	ARIZONA	\$16.17	\$33,600

Source: Bureau of Labor Statistics

The table below provides a comparison of wages by sub-industry for the Greater Phoenix region (2005). As shown, the main employment sector, “Merchant Wholesalers, Nondurable Goods” pays more than the other main employment sectors.

Wages by Industry: Greater Phoenix MSA (2005)	Rounded Employment	Mean Wage	10th Percentile Wage	25th Percentile Wage	Median Wage	75th Percentile Wage	90th Percentile Wage
Merchant Wholesalers, Nondurable Goods	30	\$21.94	\$14.16	\$18.51	\$20.95	\$24.49	\$32.67
Chemical Manufacturing	30	\$16.57	\$9.46	\$10.76	\$15.60	\$17.69	\$29.29
Professional, Scientific, and Technical Services	.	\$16.79	\$9.53	\$11.58	\$15.51	\$22.98	\$25.62

## EMPLOYMENT

As shown in the table below, this occupation has a projected 18% growth rate over 10 years (between 2003 and 2013) for the Greater Phoenix region. There are an average projected 10 job openings each year, comprised of 4 new jobs and 6 positions vacated by individuals leaving the field (due to retirement, death, career changes, or other reasons).

	10-YEAR CHANGE			AVERAGE ANNUAL		
	Employment		Percent Change	Job Openings	Growth	Separations
United States	2004	2014				
Chemical technicians	62,300	65,100	4%	1,830	n/a	n/a
Arizona	Employment		Percent Change	Job Openings	Growth	Separations
	2004	2014				
Chemical technicians	620	790	27%	30	n/a	n/a
Greater Phoenix	Employment		Percent Change	Job Openings	Growth	Separations
	2003	2013				
Chemical technicians	222	261	18%	10	4	6

Source: Bureau of Labor Statistics

\*Job Openings refers to the average annual job openings due to growth and net replacement.

Source: Bureau of Labor Statistics

\*\*N/A is displayed in cases where data is not available or cannot be published because of federal data privacy standards.

An additional source of information regarding this occupation can be provided by analysis of employer survey data collected for the Maricopa County Community Colleges by the ERISS Corporation in 2004. As shown, the ERISS survey data shows a projected 1-year growth rate of 18%, which is higher than the average of 1.8% per year reflected by the BLS data above.

Additionally, the ERISS data provides an indicator of yearly turnover for this occupation, which is reported to be moderate at 10%.

ERISS Occupational Survey Data (2004)			
Greater Phoenix	Growth	Turnover	Demand
Chemical Technicians	18%	10%	28%

### Comparison of employment projections for top five regions for Chemical Technician

As shown in the table to right, a national comparison reveals the State of Arizona ranks 4<sup>th</sup> in terms of projected 10-year growth for this occupation (27%).

RANK	Location	Employment		Percent Change
		2004	2014	
1	Nevada	440	630	43%
2	Colorado	1,270	1,730	37%
3	Utah	630	850	36%
4	Idaho	270	350	27%
4	<b>ARIZONA</b>	620	790	27%
5	Wyoming	280	340	24%

Source: Bureau of Labor Statistics

### Employment by Industry

The table below shows the industries that most commonly employ Chemical Technician, and the proportion of employment accounted for at the national level. As shown, "Testing laboratories" is the largest employer for this occupation (13.6%).

Percent of Employment Nationally by Industry	
Percent	Industry
13.6%	Testing laboratories
10.6%	Basic chemical manufacturing
9.3%	Research and development in the physical, engineering, and life sciences
7.6%	Pharmaceutical and medicine manufacturing
5.9%	Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing
4%	Management of companies and enterprises
3.7%	Paint, coating, and adhesive manufacturing

Source: Bureau of Labor Statistics

### Geo-Location Overlay of Employers with 10 or More Employees that Potentially Employ Occupation (n = 81)

