## Salaries 2006

Analysis of the American Chemical Society's 2006 Comprehensive Salary and<br>Employment Status Survey

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## Acknowledgements

This report presents detailed results of the 2006 ACS Comprehensive Salary and Employment Status Survey.
The ACS Council Committee on Economic and Professional Affairs (CEPA) and its Subcommittee on Surveys planned and provided general oversight of the survey and its analysis. The committee extends its heartfelt appreciation to those who agreed to participate in this survey.

The committee would also like to extend its appreciation to the development team. Janel Kasper-Wolfe, research analyst, and Gareth Edwards, research associate in ACS's Department of Member Research and Technology led the survey design process and produced the detailed tables. Paul Nentwig and his team at Intelliscan, Inc. implemented the survey. This report was written by Megan Henly. Blake Stenning of Pittny Creative designed the report. Eric Stewart provided copyediting services.

Warren Bush, Chair
CEPA Subcommittee on Surveys

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## Summary and Comments


esults from the annual ACS Comprehensive Salary and Employment Status Survey indicate that salaries for chemists have stabilized after several years of moderate growth. In 2006, reported salaries for chemists increased at a rate slightly higher than inflation. Unemployment remains at three percent-just below the rate reported during the last four years, but still well above the levels for chemical scientists that were typical of most years since these studies began in 1972.

SPECIAL NOTESON DATA COLLECTD

Due to a geographical sampling error, several cities were excluded from the 2006 survey. This mistake was caught by our contractor, Ellis Research when they added the new data to the ACS Salary Comparator. Certain cities, including Baltimore and San Francisco were not surveyed. Using our extensive data from the 2005 ChemCensus, Ellis was able to use a regression model to replace the missing data and correct the dataset.

ALLCHEMIStS The median salary for all chemists responding to the ACS 2006 membership survey was $\$ 86,500$ in 2006 . While this represents an increase over 2005 salaries ( $\$ 83,000$ ), it barely compensates for the inflation rate of $3.4 \%$. This indicates that while overall pay increased, the purchasing power of chemists only increased nominally.

While this is less than encouraging, it is a better scenario than reported by Michael Heylin in Chemical \& Engineering News1 regarding the 2005 salary data. The salaries from 2004 to 2005 rose only $1.2 \%$ overall - well below inflation. The situation was the same for all chemists in 2005, including bachelor's, master's, and doctorates.

TABLE 1. CHANGEIN ALLCHEMISTS SALARIES, 2005-2006

| Degree | Median Salary | \%Change from 2005 Inflation 3.4\% |  |
| :--- | :--- | :--- | :--- |
| (current dollars) | (constant dollars) |  |  |
| 2006 (2005) | $\$ 86,500(83,000)$ | UP 4.2 | UP 0.8 |
| TOTAL | $\$ 66,300(63,000)$ | UP 5.2 | UP 1.8 |
| BACHELOR'S | $\$ 78,000(74,000)$ | UP 5.4 | UP 2.0 |
| MASTER'S | $\$ 96,000(93,000)$ | UP 3.2 | DOWN 0.2 |
| DOCTORATE | $\$$ |  |  |

[^0]TABLE 2. CHANGE IN INDUSTRIAL/PRIVATE SECTOR
CHEMISTS' SALARIES, 2005-2006

| Degree | Median Salary <br> 2006 $(\mathbf{2 0 0 5})$ | \%Change from 2005 <br> (current dollars) | (constant dollars) |
| :--- | :--- | :--- | :--- |
| BACHELOR'S | $\$ 67,966(65,000)$ | UP 4.6 | UP 1.2 |
| MASTER'S | $\$ 82,560(80,000)$ | UP 3.2 | DOWN 0.2 |
| DOCTORATE | $\$ 103,000(108,000)$ | UP 4.9 | UP 1.5 |

As Table 1 shows, there were differences by level of degree in 2006. PhDs in chemistry comprise a large portion of our survey's population; therefore their data weighs heavily on the overall median. Because doctorate salaries are barely compensating for inflation, the overall salary for all chemists is repressed. The median doctorate salary is $\$ 96,000$ in 2006 compared to \$93,00o last year. This represents a decrease of $0.2 \%$ after adjusting for inflation.

Chemists at other degree levels fared better this year. Those whose highest degree is a bachelor's reported a median salary of $\$ 66,300$. This is $5.2 \%$ higher than last year and about $1.8 \%$ greater than inflation. Master's recipients earned $\$ 78,000$ in 2006 . This is a healthy $4.0 \%$ gain over 2005 reported salaries.

INDUSTRIAL/ PRIVATE SECTOR CHEMISTS

In addition to level of education, sector of employment is a major factor determining the salaries of chemists. Those working in the private sector typically have the highest salaries. Table 2 shows the reported median salaries of private sector chemists by degree level for 2005 and 2006. For all degree levels, salaries increased between $\$ 2,500$ and $\$ 5,000$ in the industri-

al sector. Proportionate to salary, this increase had the greatest impact for doctorate's recipients and the smallest impact for masters. Overall, industrial salaries are exceeding the rate of inflation.

Figure 1 introduces another factor with a bearing on salary: amount of experience. This graph shows that as number of years since earning a degree increases, salary generally rises as well. The pattern is similar for all levels of degrees. Master's salaries are slightly higher than bachelor's salaries. PhD salaries are a substantially higher. However, 30 years after earning a PhD, industrial salaries appear to reach their maximum earning potential, beginning to fall slightly afterwards.

## ACADEMICCHEMISTS

How do academic salaries compare with those of private sector employees? Table 3 shows the median salaries of PhD chemists by faculty rank. Compared to private sector chemists salary increases in academia have been weak. However, the overall picture is not clear. Assistant professors reported increases of $4.1 \%$ (for those on a 9-10 month salary base) to $4.8 \%$ (for those on 12 month salary base) over 2005 salaries. This repre-

TABLE 3. CHANGE IN PH.D. ACADEMIC CHEMISTS' SALARIES, 2005-2006

| Rank/ <br> Contract | Median Salary <br> 2006 (2005) | \% Change from 2005 <br> (current dollars) |  |
| :--- | :--- | :--- | :--- |
| (constant dollars) |  |  |  |
| FULL 9/10 | $\$ 86,405(84,000)$ | UP 2.9 | DOWN 0.5 |
| FuLL 11/12 | $\$ 130,000(119,000)$ | UP 4.6 | UP 1.2 |
| Assoc 9/10 | $\$ 60,000(58,000)$ | UP 3.4 | NO CHANGE |
| Assoc 11/12 | $\$ 82,000(80,000)$ | UP 2.5 | DOWN 0.9 |
| Asst 9/10 | $\$ 52,045(50,000)$ | UP 4.1 | UP 0.7 |
| Asst $11 / 12$ | $\$ 62,000(65,000)$ | DOWN 3.1 | DOWN 6.5 |

sented an increase even greater than inflation. Associate professors, on the other hand, experienced no real increase over last year (3.4\% up to $\$ 60,000$ ) at the 9-10 month level or even slightly below inflation ( $2.5 \%$ up to $\$ 82,000$ ) at the 11-12 month base. Chemists with full professorships had the most inconsistent trend. While those paid by the academic year earned less than last year in constant dollars $(\$ 86,460)$, those paid for the entire calendar year reported an increase of $1.2 \%$ over inflation since 2005 ( $\$ 124,447$ ). The reason for this pattern is not clear, although it emphasizes the importance of looking at such level of detail when comparing academic salaries.

OTHER FACTORS INFLUENCING SALARY

These tables offer an overview of salaries by degree level and employment sector. While these may be the most influential correlates of salary, a variety of other factors should also be considered.
As Figure 1 showed earlier, years of experience is particularly important. The tables in the appendix offer a detailed breakdown of the current salary ranges for chemists by amount of experience within each degree level and employment sector (Tables 1.1.ו.ו.ו.1 to $)$.

FIGURE 2. CHEMISTS' MEDIAN SALARIES IN CURRENT AND CONSTANT DOLLARS (IN CURRENT YEAR DOLLARS)

(IN CONSTANT 1984 DOLLARS)


The appendix tables also compare salaries by the type of work performed. Table 2.2.2 shows that private sector chemists with bachelor's degrees who work as managers earn substantially more (\$90,000 on average) when compared to those performing analytical services ( $\$ 58,000$ ). Similar tables are available for other degree levels and employment sectors. These detailed data can be useful for evaluating one's current salary.

TRENDS IN CHEMISTS' SALARIES The median salaries of chemists have reliably increased every year. Figure 2 displays the amount of the increase by degree level. The top half of this chart shows the increase in current dollars, or the amount actually reported at the time of the study. Here we see that salaries for chemists have more than doubled over the last two decades. With these increases, the differences between degree levels appear to have widened. However, the lower half of this chart puts the increases into context by showing median salaries in 1984 dollars.

In the second graph, it is clear that chemist salaries have held relatively constant with inflation since 1985. Not until 2002 did these salaries begin to increase above the inflation rate. This real increase occurred at all degree levels but perhaps most notably among PhDs. This graph also shows that as time passes, salaries are not becoming particularly divergent across levels of education. The salaries of master's recipients follow a very similar pattern to that of bachelor's. Only recently have doctoral salaries began to increase at a slightly faster rate than lower degree levels.

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## Non-Salary Income

## CONSULTING

Salaries do not provide a complete picture of the earning potential of chemists. A good number have employers that provide yearly bonuses to supplement their salaries. Some chemists also seek freelance work outside of their primary employment. This section examines the additional income received by chemists in 2005 .

Overall, $8 \%$ of chemists surveyed reported earning some income from consulting. This freelance work contributes a median value of $\$ 9,000$ to a worker's income. These additional funds are particularly important to academics who may not receive a paycheck during the summer. Almost one in five ( $18.5 \%$ ) college and university

## TABLE 4. CONSULTING DONEIN 2006

|  | \% Consult | Hourly Rate | Median Income |
| :--- | :---: | :---: | :---: |
| ALL CHEMISTS | $8.0 \%$ | $\$ 110$ | $\$ 9,000$ |
| DEGREE |  |  |  |
| $\quad$ B.S. | $6.0 \%$ | $\$ 85$ | $\$ 24,000$ |
| M.S. | $4.7 \%$ | $\$ 90$ | $\$ 22,500$ |
| Ph.D. | $10.6 \%$ | $\$ 125$ | $\$ 5,650$ |
|  |  |  |  |
| EMPLOYER |  |  |  |
| $\quad$ INDUSTRY-MFG. | $3.1 \%$ | $\$ 100$ | $\$ 9,400$ |
| $\quad$ INDUSTRY-NON MFG. | $5.8 \%$ | $\$ 108$ | $\$ 44,000$ |
| $\quad$ GOVERNMENT | $2.9 \%$ | $\$ 75$ | $\$ 4,250$ |
| COLLEGE OR UNIV. | $18.5 \%$ | $\$ 105$ | $\$ 4,000$ |
|  |  |  |  |
| SEX |  |  |  |
| MEN | $9.0 \%$ | $\$ 120$ | $\$ 10,000$ |
| WOMEN | $5.4 \%$ | $\$ 100$ | $\$ 4,000$ |
|  |  |  |  |
| AGE | $2.1 \%$ | $\$ 28$ | $\$ 4,500$ |
| 20-29 | $4.4 \%$ | $\$ 100$ | $\$ 3,750$ |
| 30-39 | $7.1 \%$ | $\$ 105$ | $\$ 8,000$ |
| 40-49 | $10.0 \%$ | $\$ 104$ | $\$ 10,000$ |
| 50-59 | $15.5 \%$ | $\$ 150$ | $\$ 12,000$ |

Note: This year's respondents asked for previous year's consulting.
employees reported doing some consulting in 2005 . The academic consultants charged a median of $\$ 105$ an hour and earned \$4,000 last year.
While academia is the profession where the greatest proportion of employees performs freelance work, it is not the sector that allows for the most profit. Private sector employees reported the largest income from contract work. Manufacturing chemists who freelanced in 2005 typically earned $\$ 9,400$ doing so. Non-manufacturing private sector chemists brought in $\$ 44,000$ on average. This may be attributable to self-employed chemists reporting their yearly income.
The hourly consulting rate appears to be determined by degree level and number of years of experience. Those whose highest degree is a bachelor's charged an median rate of $\$ 85$ an hour. Master's recipients charged \$90 and PhDs \$125 hourly. PhDs were most likely to do consulting: 10.6\% reported additional income in 2005 . Age also appears to be correlated with hourly rate. The $2.1 \%$ of chemists in their twenties only charged about $\$ 28$ an hour for the work performed. By comparison, those over age sixty charged \$150 an hour.

BONUSES
Not all employers offer employee bonuses every year or to every employee. Last year, about half of chemists reported that they were eligible to receive a bonus. Of those eligible, $91.8 \%$ received a bonus with a median value of $\$ 6,532$. The amount of the bonus appears to be related to the employee's education level and amount of experience, as well as the sector of employment.

| TABLE 5. BONUSES RECEIVED IN 2006 |  |  |  |
| :---: | :---: | :---: | :---: |
|  | \% Eligible | \% of Eligible Received | Median <br> Bonus |
| All chemists | 49.3\% | 91.8\% | \$6,532 |
| Degree |  |  |  |
| B.S. | 56.8\% | 91.1\% | \$4,000 |
| M.S. | 53.9\% | 93.4\% | \$6,000 |
| Рн.D. | 45.5\% | 91.5\% | \$9,000 |
| Employer |  |  |  |
| Industry-mFg. | 71.9\% | 94.5\% | \$8,000 |
| Industry-NON MFG. | 58.4\% | 86.2\% | \$5,000 |
| Government | 38.1\% | 87.3\% | \$2,000 |
| College or univ. | 3.4\% | 81.6\% | \$3,000 |
| Sex |  |  |  |
| Men | 51.0\% | 91.5\% | \$8,000 |
| WOMEN | 44.3\% | 92.7\% | \$4,500 |
| Age |  |  |  |
| 20-29 | 44.1\% | 92.0\% | \$2,330 |
| 30-39 | 47.0\% | 93.3\% | \$5,000 |
| 40-49 | 55.2\% | 92.4\% | \$7,800 |
| 50-59 | 52.3\% | 91.2\% | \$10,000 |
| 60-69 | 37.3\% | 87.9\% | \$6,000 |
| Note: This year's respondents asked for previous year's bonuses. |  |  |  |

Of those who earned a bonus, the typical amount for chemists with a bachelor's degree was $\$ 4,000$. Master's recipients earned an additional $\$ 6,000$ and PhD's earned $\$ 9,000$. While the amount of the bonus was higher for doctorates compared to other degree levels, fewer were eligible to receive a bonus ( $45.5 \%$ of PhDs compared to $53.9 \%$ of master's and $56.8 \%$ of bachelor's). This is consistent with the findings by employment sector where college and university employees are far less likely to be eligible for ( $13.4 \%$ ) and receive (81.6\%) a bonus. PhDs are overwhelmingly represented in academia.

Bonuses for chemists are also less common in government. Only about $38 \%$ of government employees said that they could receive a bonus in 2005. Of the ones who did receive a bonus, its typical value was only about $\$ 2,000$. Bonuses are utilized most often in the private sector where employers must be competitive with the perks offered by other companies. Non-manufacturing industries awarded \$5,000 to their chemists, on average. Manufacturing companies were even more generous. Almost $72 \%$ of chemists in this field were eligible for a bonus and nearly all ( $94.5 \%$ ) received one. The typical amount of the bonus was \$8,000.

Age may be used as a proxy measure for level of experience. As age (and therefore, number of years experience) increases, so does the amount of the bonus awarded. For each ten year increase, the bonus amount tends to increase approximately $\$ 2,500$. Those aged 20-29 typically earned a bonus of $\$ 2,330$. Chemists in their fifties reported bonuses around \$10,000. After age 59, fewer chemists are eligible for bonuses ( $37.3 \%$ ) and the amount of the bonus typically awarded drops.

The average bonus awarded to a female chemist was about half the value $(\$ 4,500)$ of that provided to male chemists $(\$ 8,000)$. This is likely attributable to women's representation in some of the less-provided for areas (degree level, employment sector, and age).

STOCK AS PARTOF PROFESSIONALINCOME

FIGURE 3. RECEIPT OF STOCK AS PART OF PROFESSIONAL INCOME FOR CHEMISTS: 2005 \& 2006


Note: This year's respondents asked for previous year's receipt of stock.

Another method of compensating employees is to offer company stock. ACS began asking our members about stock options received in the 2001 survey. Since then, the proportion reporting this type of remuneration has decreased subtly but consistently until this year. In $2002,17.1 \%$ of chemists received stock options from their employers. In 2003, $16.5 \%$ received this benefit. By 2004, the proportion was $15.3 \%$ and in 2005 it was $15.2 \%$. This year, $16.1 \%$ received stocks, indicating that perhaps the decline has stabilized.

Figure 3 shows the proportion of chemists who received stock options in 2005 and 2006 by a variety of characteristics. In almost every sub-category, the proportion offered stocks increased in the last year. PhDs were more likely than other degree levels to receive stocks as part of their overall compensation ( $17.5 \%$ compared to $14.3 \%$ for bachelor's and 13.4\% for master's). As might be expected, almost all of those receiving stocks worked for private companies. However, a small proportion of government (1.1\%) and academic (3.1\%) employees received this benefit. Within the private sector, stock options were most prevalent in manufacturing where over a quarter ( $27 \%$ ) of chemists received them.

Small discrepancies may be noted by sex and age of the chemist. These differences are likely due to the representation of these groups within certain degree levels or employment sectors.

## Employment and Unemployment

This year $86.9 \%$ of chemists surveyed were employed in full-time positions. This is comparable to the past couple of years but 3.6 percentage points lower than the proportion working full-time a decade ago (90.5\% in 1997). This shift is not due to increased unemployment, but rather a slightly larger proportion of chemists working part-time. In 2005, almost 4\% worked parttime. This year $3.3 \%$ worked fewer than 35 hours a week. In 1997 the proportion was just $2.1 \%$. In 2006 the proportion of chemists employed in temporary postdoctorate positions was $2.2 \%$, similar to the past few years.
Around $4.4 \%$ of chemists surveyed were outside of the labor force either through retirement or by choosing not to work.

## UNEMPLOYMENT TRENDS

While income is one way of measuring the climate of the workforce for chemical scientists, the trend in unemployment is another important way of understanding the situation. Figure 4 shows the proportion of all chemists and chemical engineers in the workforce who were seeking employment at the time of our study. It is clear that unemployment is generally higher now than it was in the early 1980's when ACS found very few chemists in need of work. However, for the most recent five years, we can see a leveling off in the unemployment rate. In $20063 \%$ of chemists and $2.2 \%$ of chemical engineers were seeking work. This is slightly lower than the record high unemployment rates set in the past two years.

FIGURE 4. UNEMPLOYMENT RATES FOR CHEMISTS AND CHEMICALENGINEERS, $1972-2006$


The employment rates of chemists and chemical engineers have historically followed one another. However, between 2005 and 2006 the proportion of chemical engineers who are not working fell faster than that of chemists. The chemical engineering unemployment rate has been somewhat inconsistent over the past few years: very high in 2003 (6.0\%), but only around $3 \%$ the year before and after. This may be because the ACS survey population consists mainly of chemists, making the estimates for chemical engineers somewhat less representative of their population. We should monitor the unemployment rate for these two groups over the next few years to determine the true relationship of unemployment between chem-

## Technical Notes

THE SAMPLE The target population of the 2006 ACS Comprehensive Salary and Employment Status Survey is ACS regular members under the age of 70 who have U.S. mailing addresses and have neither student, retired, nor emeritus membership status. This year, a general sample was drawn from a database consisting of all members meeting the above criteria. A notification postcard with the web address of the survey was mailed to 24,000 members during the spring of 2006 . Ultimately, 8,580 usable responses were received, a $35.8 \%$ response rate.

DEFINITIONS For the purposes of the survey analysis, the following definitions were used:
Chemist: A respondent who indicated a work specialty of chemistry or biochemistry (categories 2 through 16 of Part 1, Question 3 of the questionnaire) or, if a non-chemistry work specialty (categories 17 through 20 of the same question), a degree field of chemistry or biochemistry.

Chemical Engineer: A respondent who indicated a work specialty of chemical engineering (category 1 of Part 1 , Question 3 of the questionnaire).

Nonchemist: A respondent whose work specialty category is other than chemistry or chemical engineering, or if non-chemistry work specialty, no degree field of chemistry or biochemistry.

Academic: Pertaining to Ph.D.s working in a college or university, i.e., a private or public institution that awards a degree of associate or higher.

Unemployed: A respondent who was not employed and was seeking employment (category 4 of Part 1, Question 4 of the questionnaire). The unemployment rate calculated to compare with the national rate drops those "not seeking" or "fully retired" from the labor force.

Respondents indicated their employment status, base annual salaries, and ages as of March 1, 2006. The respondent's place of employment (current or most recent) determines geographic region. The listing of states by geographic regions follows this section.

DISCREPANCIESAMONGTABLES Some pairs of tables contain totals that should be identical but are not. For example, two tables that represent information about Ph.D. respondents should show the same total number of PhDs. However, they might show different totals. This phenomenon is generally caused by missing response items in a survey. Not every respondent answers all questions all of the time. To illustrate, if one table groups the Ph.D.s according to specialty and another groups them according to work function, the totals will differ unless the number who did not indicate their specialty is the same number (or person even) that did not indicate their work function.

COMPARING SALARIES Questions arise frequently about salary comparisons, such as between degrees of men and women. All such comparisons require caution. The salaries here represent the medians and means of ACS members. Most of the statistics in this report are descriptive in nature, not analytical.

Tests of significance should be performed on any salary discrepancies to see whether the observed salary differences between groups are mere chance resulting from some peculiarity of the sample itself. The significance of a difference between subpopulations depends on multiple factors. These factors include, among other things, the magnitude of the difference within the sample and between sample groups, and sample size.

NONRESPONSEBIAS One source of sample error may arise from a response bias. Members who respond may be different than members who do not respond. Past comparisons of ACS membership records showed no bias in terms of age, sex, employer, or geographic region. In addition, a telephone follow-up of 388 nonrespondents to the 1991 survey showed the nonrespondents salaries were virtually the same as the respondents. The mean salary for the respondents was \$57,007; for nonrespondents it was \$57,982. A t-test of the difference between the mean salaries of the two groups resulted in no significant difference between the means. Student's t 4 was only 0.57 between the two groups. The percent in both groups that were unemployed was also the same - 1.6\%.

## List of Possible <br> Abbreviations for Tables

|  | Abbreviation | Degree |
| :---: | :---: | :---: |
| degrees | B.A. | Bachelor of Arts |
|  | B.S. | Bachelor of Science or all bachelor's degrees |
|  | M.S. | Master of Sciences |
|  | Ph.D. | Doctor of Philosophy |
| FIELDS OF DEGREEAND | Chem eng | Chemical Engineering |
|  | Ag chem | Agricultural/food chemistry |
|  | Analyt chem | Analytical chemistry |
|  | Biochem | Biochemistry |
|  | Biotech | Biotechnology |
|  | Chem ed | Chemical education |
|  | Clinical chem | Clinical chemistry |
|  | Environ chem | Environmental chemistry |
|  | Gen chem | General Chemistry |
|  | Inorg chem | Inorganic chemistry |
|  | Material sci | Materials science |
|  | Med/pharma | Medicinal/pharmaceutical chemistry |
|  | Organic chem | Organic chemistry |
|  | Physical chem | Physical chemistry |
|  | Polymer chem | Polymer chemistry |
|  | Other chem | Other chemical sciences |
|  | Bus admin | Business administration |
|  | Computer sci | Computer science |
|  | Othr non-chem | Other non-chemistry |
|  | Abbreviation | Region |
| REGIONS | Pacific | Pacific |
|  | Mountain | Mountain |
|  | WN Central | West North Central |
|  | WS Central | West South Central |
|  | EN Central | East North Central |
|  | ES Central | East South Central |
|  | Mid-Atlantic | Middle Atlantic |
|  | So-Atlantic | South Atlantic |
|  | New England | New England |
|  | WN Central | West North Central |


| EMPLOYERS | Abbreviation | Employer |
| :---: | :---: | :---: |
|  | Mfg | Manufacturing |
|  | Aero/auto | Aerospace/auto/transportation |
|  | Ag chem | Agricultural chemicals |
|  | Basic chem | Basic commodity chemicals |
|  | Biochem prods | Biochemical products |
|  | Building mats | Building materials |
|  | Coating/ink | Coatings/ink/paints |
|  | Electronics | Electronics/computers/semiconductors |
|  | Food | - |
|  | Instruments | - |
|  | Med products | Medical devices/diagnostic products |
|  | Metals | Metals/minerals |
|  | Paper | - |
|  | Personal care | - |
|  | Petroleum | Petroleum/natural gas |
|  | Pharma prods | Pharmaceutical products |
|  | Plastics | - |
|  | Rubber | - |
|  | Soaps | Soaps/detergents/surfactants |
|  | Spec chem | Specialty/fine chemicals |
|  | Textiles | - |
|  | Othr mfg | Other manufacturing |
|  | Non-mfg | Non-manufacturing |
|  | Analyt lab | Analytical service/testing laboratory |
|  | Biotech resrch | Biotech research firm |
|  | Indep research | Independent or contract research firm |
|  | Hospital lab | Hospital or clinical laboratory |
|  | Non-profit | Non-profit organization |
|  | Private utility | Private utility company |
|  | Profl services | Professional services-scientific/engineering/law |
|  | Research inst | Research institution |
|  | Science temp | Scientific temporary or personnel agency |
|  | Othr non-mfg | Other non-manufacturing |
|  | Government | - |
|  | Federal | Federal (civilian) |
|  | Military | - |
|  | State or local | - |
|  | Othr govmt | Other Government |
|  | Self-employed | - |


|  | Abbreviation | Employer |
| :---: | :---: | :---: |
| EMPLOYERS (CONT'D) | Government | - |
|  | Federal | Federal (civilian) |
|  | Military | - |
|  | State or local | - |
|  | Othr govmt | Other Government |
|  | Self-employed | - |
| WORK FUNCTIONS | Analyt svcs | Analytical services, other than forensics |
|  | Chem info | Chemical information services |
|  | Computer | Computer programming, analysis, design |
|  | Consulting | - |
|  | Forensic | Forensic analysis |
|  | Gen mgmt | General management or administration, other than R\&D |
|  | Health/safety | Health and safety/regulatory affairs |
|  | Marketing | Marketing, sales, purchasing, technical service, economic evaluation |
|  | Patents | Patents, licensing, trademarks |
|  | Production QC | Production, quality control |
|  | R\&D-applied | R\&D-Applied research, development, design |
|  | R\&D-basic | R\&D-Basic research |
|  | R\&D-mgmt | R\&D-Management or administration of R\&D |
|  | Training | Training or teaching |
|  | Other | - |

## Geographic Regions

| Pacific | West South Central | South Atlantic |
| :--- | :---: | :--- |
| Alaska | Arkansas | Delaware |
| California | Louisiana | District of |
| Hawaii | Oklahoma | Columbia |
| Oregon | Texas | Florida |
| Washington |  | Georgia |
|  | East North Central | Maryland |
| Mountain | Illinois | North Carolina |
| Arizona | Indiana | South Carolina |
| Colorado | Michigan | Virginia |
| Idaho | Ohio | West Virginia |
| Montana | Wisconsin |  |
| Nevada |  | New England |
| New Mexico | EAst South Central | Connecticut |
| Utah | Alabama | Maine |
| Wyoming | Kentucky | Massachusetts |
|  | Mississippi | New Hampshire |
| West North Central | Tennessee | Rhode Island |
| Iowa |  | Vermont |
| Kansas | Middle Atlantic |  |
| Minnesota | New Jersey |  |
| Missouri | New York |  |
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Bachelor's Degree Holders:
Years since the B.S. and:
$\begin{array}{lll}\text { Work Specialty } & 2.2 .1 \quad 27\end{array}$
$\begin{array}{lll}\text { Work Function } & 28\end{array}$
$\begin{array}{lll}\text { Type of Industry } & \text { 2.2.3 } & 29\end{array}$
Geographic Region 2.2.4 30
Size of Employer 2.2.6 31
Master's Degree Holders:
Years since the B.S. and:
Work Specialty 2.3.1 32
$\begin{array}{lll}\text { Work Function } & \text { 2.3.2 } & 33\end{array}$
$\begin{array}{lll}\text { Type of Industry } & 2.3 .3 & 34\end{array}$
$\begin{array}{lll}\text { Geographic Region } & 2.3 .4 \quad 35\end{array}$
$\begin{array}{lll}\text { Size of Employer } & 2.3 .6 & 36\end{array}$
Doctorate Degree Holders:
Years since the B.S. and:
Work Specialty 2.4.1 37
Work Function 2.4.2 40
$\begin{array}{ll}\text { Type of Industry } & 2.4 .3 \quad 42\end{array}$
$\begin{array}{ll}\text { Geographic Region } & \text { 2.4.4 }\end{array} 44$
$\begin{array}{lll}\text { Size of Employer } & 2.4 .6 & 46\end{array}$


Table 1.1.1
SALARIES of BS CHEMISTS employed FULL-TIME by EMPLOYER TYPE and YEARS SINCE BS 2006 ACS Salary Survey

| EMPLOYER TYPE |  |  | Count | Mean | Std Dev | 25th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Industry_Mfg | Total | 923 | 75,356 | 32,892 | 53,000 |
|  |  | 2-4 | 103 | 49,514 | 14,989 | 40,000 |
|  |  | 5-9 | 154 | 56,929 | 19,673 | 45,500 |
|  |  | 10-14 | 130 | 67,928 | 21,853 | 52,000 |
|  |  | 15-19 | 95 | 77,644 | 22,383 | 61,000 |
|  |  | 20-24 | 124 | 82,749 | 23,213 | 65,520 |
|  |  | 25-29 | 131 | 90,291 | 27,490 | 71,586 |
|  |  | 30-34 | 100 | 93,177 | 46,489 | 64,800 |
|  |  | 35-39 | 49 | 92,501 | 46,620 | 62,480 |
|  |  | 40 or more | 34 | 101,064 | 50,619 | 76,000 |
|  | Industry_Non-MFG | Total | 238 | 66,196 | 30,338 | 45,634 |
|  |  | 2-4 | 35 | 43,256 | 13,653 | 30,500 |
|  |  | 5-9 | 39 | 51,019 | 14,074 | 41,000 |
|  |  | 10-14 | 40 | 65,216 | 21,431 | 50,000 |
|  |  | 15-19 | 24 | 74,566 | 22,685 | 58,795 |
|  |  | 20-24 | 34 | 66,059 | 25,578 | 49,000 |
|  |  | 25-29 | 26 | 84,733 | 25,084 | 63,000 |
|  |  | 30-34 | 22 | 81,026 | 28,191 | 65,520 |
|  | Government | Total | 146 | 69,142 | 25,617 | 50,000 |
|  |  | 20-24 | 17 | 68,507 | 17,974 | 53,040 |
|  |  | 25-29 | 29 | 78,232 | 25,991 | 50,000 |
|  |  | 30-34 | 27 | 74,726 | 26,462 | 64,000 |
|  | High School College or University | Total | 40 | 42,042 | 14,102 | 34,000 |
|  |  | Total | 70 | 54,744 | 24,434 | 38,000 |
|  |  | 5-9 | 15 | 44,750 | 15 | 44,750 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 1.1.1
SALARIES of BS CHEMISTS employed FULL-TIME by EMPLOYER TYPE and YEARS SINCE BS 2006 ACS Salary Survey

|  |  |  | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { EMPLOYER } \\ & \text { TYPE } \end{aligned}$ | Industry_Mfg | Total | 70,000 | 91,000 |
|  |  | 2-4 | 47,200 | 57,000 |
|  |  | 5-9 | 53,000 | 64,700 |
|  |  | 10-14 | 66,300 | 79,864 |
|  |  | 15-19 | 78,000 | 91,000 |
|  |  | 20-24 | 81,650 | 98,000 |
|  |  | 25-29 | 88,400 | 105,000 |
|  |  | 30-34 | 88,000 | 105,000 |
|  |  | 35-39 | 87,000 | 110,000 |
|  |  | 40 or more | 86,000 | 110,000 |
|  | Industry_Non-MFG | Total | 60,935 | 80,000 |
|  |  | 2-4 | 40,000 | 48,000 |
|  |  | 5-9 | 50,000 | 58,000 |
|  |  | 10-14 | 60,000 | 74,000 |
|  |  | 15-19 | 71,100 | 85,000 |
|  |  | 20-24 | 60,000 | 80,500 |
|  |  | 25-29 | 81,000 | 100,000 |
|  |  | 30-34 | 82,500 | 100,000 |
|  | Government | Total | 68,519 | 86,000 |
|  |  | 20-24 | 68,000 | 80,280 |
|  |  | 25-29 | 82,500 | 96,500 |
|  |  | 30-34 | 75,000 | 87,314 |
|  | High School | Total | 41,500 | 48,000 |
|  | College or | Total | 50,000 | 70,200 |
|  | University | 5-9 | 16,065 | 35,300 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 1.1.2
SALARIES of MS CHEMISTS employed FULL-TIME by EMPLOYER TYPE and YEARS SINCE BS 2006 ACS Salary Survey


Note: Categories with fewer than 15 cases have been suppressed.

Table 1.1.2
SALARIES of MS CHEMISTS employed FULL-TIME by EMPLOYER TYPE and YEARS SINCE BS 2006 ACS Salary Survey

|  |  |  | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { EMPLOYER } \\ & \text { TYPE } \end{aligned}$ | Industry_Mfg | Total | 84,600 | 101,000 |
|  |  | 5-9 | 61,000 | 69,000 |
|  |  | 10-14 | 71,000 | 81,100 |
|  |  | 15-19 | 80,000 | 92,000 |
|  |  | 20-24 | 92,437 | 104,000 |
|  |  | 25-29 | 91,348 | 110,000 |
|  |  | 30-34 | 96,000 | 118,328 |
|  |  | 35-39 | 95,280 | 120,000 |
|  |  | 40 or more | 100,000 | 111,000 |
|  | Industry_Non-MFG | Total | 74,500 | 97,000 |
|  |  | 5-9 | 54,000 | 71,847 |
|  |  | 10-14 | 65,000 | 83,000 |
|  |  | 15-19 | 68,307 | 80,000 |
|  |  | 20-24 | 74,500 | 82,871 |
|  |  | 25-29 | 79,000 | 92,500 |
|  |  | 30-34 | 77,000 | 114,200 |
|  |  | 35-39 | 91,956 | 105,000 |
|  | Government | Total | 80,000 | 97,461 |
|  |  | 10-14 | 52,000 | 63,000 |
|  |  | 25-29 | 86,000 | 106,641 |
|  |  | 30-34 | 79,548 | 90,000 |
|  |  | 35-39 | 83,384 | 104,000 |
|  | High School | Total | 60,000 | 73,500 |
|  |  | 30-34 | 64,000 | 69,000 |
|  |  | 35-39 | 55,000 | 72,000 |
|  |  | 40 or more | 78,000 | 90,000 |
|  | College or University | Total | 55,000 | 70,691 |
|  |  | 10-14 | 53,000 | 58,000 |
|  |  | 15-19 | 47,900 | 65,000 |
|  |  | 20-24 | 70,000 | 95,600 |
|  |  | 25-29 | 49,000 | 62,000 |
|  |  | 30-34 | 55,000 | 60,250 |
|  |  | 40 or more | 50,000 | 61,400 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 1.1.3
SALARIES of PhD CHEMISTS employed FULL-TIME
by EMPLOYER TYPE and YEARS SINCE BS 2006 ACS Salary Survey

| EMPLOYER TYPE |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Industry_Mfg | Total | 1993 | 117,118 | 43,795 | 92,500 | 109,450 | 134,000 |
|  |  | 5-9 | 79 | 78,411 | 14,533 | 70,000 | 78,000 | 87,300 |
|  |  | 10-14 | 219 | 93,630 | 19,739 | 80,000 | 94,500 | 105,000 |
|  |  | 15-19 | 293 | 105,729 | 26,373 | 90,000 | 102,045 | 121,030 |
|  |  | 20-24 | 388 | 114,894 | 34,344 | 94,495 | 110,000 | 130,000 |
|  |  | 25-29 | 317 | 126,050 | 39,548 | 100,000 | 120,000 | 145,561 |
|  |  | 30-34 | 319 | 135,752 | 53,470 | 105,768 | 125,000 | 151,000 |
|  |  | 35-39 | 230 | 126,958 | 45,234 | 102,000 | 120,000 | 147,000 |
|  |  | 40 or more | 138 | 124,947 | 62,659 | 95,000 | 115,000 | 142,000 |
|  | Industry_Non-MFG | Total | 462 | 109,525 | 46,212 | 81,000 | 99,711 | 125,000 |
|  |  | 5-9 | 23 | 80,223 | 22,794 | 68,000 | 80,000 | 93,000 |
|  |  | 10-14 | 72 | 88,733 | 28,797 | 69,500 | 88,000 | 102,671 |
|  |  | 15-19 | 65 | 104,789 | 41,968 | 83,200 | 97,136 | 118,000 |
|  |  | 20-24 | 87 | 115,415 | 43,213 | 87,000 | 110,000 | 129,500 |
|  |  | 25-29 | 55 | 120,527 | 50,091 | 83,000 | 108,480 | 132,948 |
|  |  | 30-34 | 55 | 123,312 | 48,613 | 88,000 | 115,000 | 150,000 |
|  |  | 35-39 | 52 | 120,301 | 61,370 | 89,000 | 104,000 | 130,000 |
|  |  | 40 or more | 51 | 110,143 | 45,747 | 80,400 | 100,000 | 132,000 |
|  | Government | Total | 331 | 104,547 | 31,219 | 84,000 | 100,550 | 125,000 |
|  |  | 10-14 | 28 | 85,370 | 20,408 | 74,650 | 84,240 | 95,410 |
|  |  | 15-19 | 25 | 86,754 | 19,615 | 73,720 | 85,086 | 99,000 |
|  |  | 20-24 | 39 | 106,744 | 34,757 | 90,000 | 97,500 | 120,000 |
|  |  | 25-29 | 53 | 104,771 | 26,748 | 87,400 | 100,550 | 117,437 |
|  |  | 30-34 | 40 | 107,153 | 31,871 | 89,000 | 105,039 | 136,000 |
|  |  | 35-39 | 57 | 110,907 | 32,248 | 87,780 | 112,000 | 129,023 |
|  |  | 40 or more | 75 | 115,691 | 31,662 | 98,537 | 118,828 | 139,000 |
|  | Self-Employer | Total | 42 | 146,573 | 100,351 | 75,000 | 127,000 | 200,000 |
|  |  | 40 or more | 15 | 155,520 | 132,855 | 50,000 | 131,250 | 150,000 |
|  | High School | Total | 44 | 58,988 | 17,461 | 46,000 | 60,000 | 70,000 |
|  | College or University | Total | 1566 | 80,679 | 41,373 | 53,000 | 70,800 | 94,272 |
|  |  | 5-9 | 76 | 54,220 | 16,523 | 43,000 | 48,000 | 60,000 |
|  |  | 10-14 | 213 | 56,720 | 22,003 | 43,069 | 52,000 | 64,000 |
|  |  | 15-19 | 233 | 66,824 | 28,939 | 50,000 | 60,000 | 75,000 |
|  |  | 20-24 | 201 | 72,895 | 24,922 | 56,000 | 68,000 | 82,400 |
|  |  | 25-29 | 187 | 81,043 | 37,945 | 55,000 | 70,000 | 96,300 |
|  |  | 30-34 | 156 | 89,270 | 43,399 | 60,000 | 78,000 | 102,450 |
|  |  | 35-39 | 190 | 99,610 | 53,219 | 71,242 | 87,400 | 112,000 |
|  |  | 40 or more | 301 | 103,259 | 47,178 | 72,000 | 90,700 | 128,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.1.1

## SALARIES of INDUSTRIAL CHEMISTS employed FULL-TIME by DEGREE and YEARS SINCE BS 2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HIGHEST DEGREE | $\begin{aligned} & \text { BA or } \\ & \text { BS } \end{aligned}$ | Total | 1161 | 73,478 | 32,583 | 51,150 | 68,000 | 90,000 |
|  |  | 2-4 | 138 | 47,927 | 14,866 | 38,000 | 45,405 | 56,489 |
|  |  | 5-9 | 193 | 55,735 | 18,796 | 45,000 | 52,000 | 63,500 |
|  |  | 10-14 | 170 | 67,289 | 21,722 | 51,000 | 65,283 | 76,200 |
|  |  | 15-19 | 119 | 77,023 | 22,382 | 61,000 | 76,000 | 90,405 |
|  |  | 20-24 | 158 | 79,158 | 24,638 | 61,000 | 77,700 | 96,264 |
|  |  | 25-29 | 157 | 89,371 | 27,109 | 70,000 | 88,400 | 105,000 |
|  |  | 30-34 | 122 | 90,986 | 43,912 | 65,000 | 85,000 | 105,000 |
|  |  | 35-39 | 60 | 92,134 | 52,541 | 61,000 | 83,250 | 110,000 |
|  |  | 40 or more | 40 | 100,477 | 48,287 | 75,000 | 87,000 | 110,790 |
|  | MS | Total | 902 | 87,375 | 32,785 | 66,000 | 82,560 | 100,500 |
|  |  | 5-9 | 83 | 61,386 | 13,811 | 52,500 | 61,000 | 69,264 |
|  |  | 10-14 | 125 | 72,101 | 18,216 | 60,870 | 71,000 | 82,800 |
|  |  | 15-19 | 114 | 78,728 | 19,847 | 65,000 | 77,553 | 91,000 |
|  |  | 20-24 | 144 | 92,752 | 30,016 | 73,850 | 88,632 | 103,000 |
|  |  | 25-29 | 130 | 92,513 | 27,548 | 76,000 | 88,600 | 109,803 |
|  |  | 30-34 | 151 | 99,860 | 36,404 | 79,000 | 95,500 | 118,328 |
|  |  | 35-39 | 98 | 103,618 | 43,984 | 74,000 | 95,000 | 120,000 |
|  |  | 40 or more | 43 | 99,774 | 44,061 | 84,000 | 100,000 | 110,000 |
|  | PHD | Total | 2455 | 115,689 | 44,349 | 90,000 | 108,000 | 132,948 |
|  |  | 5-9 | 102 | 78,820 | 16,639 | 70,000 | 78,000 | 90,000 |
|  |  | 10-14 | 291 | 92,419 | 22,370 | 77,500 | 92,000 | 104,500 |
|  |  | 15-19 | 358 | 105,559 | 29,745 | 89,300 | 101,000 | 120,000 |
|  |  | 20-24 | 475 | 114,989 | 36,081 | 93,000 | 110,000 | 130,000 |
|  |  | 25-29 | 372 | 125,233 | 41,246 | 98,000 | 117,750 | 145,000 |
|  |  | 30-34 | 374 | 133,923 | 52,906 | 104,000 | 123,500 | 151,000 |
|  |  | 35-39 | 282 | 125,730 | 48,556 | 97,000 | 119,600 | 143,200 |
|  |  | 40 or more | 189 | 120,953 | 58,831 | 90,000 | 111,800 | 141,400 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.1.2
SALARIES of MEN CHEMISTS employed FULL-TIME in INDUSTRY by DEGREE and YEARS SINCE BS 2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HIGHEST DEGREE | $\begin{aligned} & \text { BA or } \\ & \text { BS } \end{aligned}$ | Total | 758 | 78,697 | 35,363 | 56,000 | 72,000 | 95,000 |
|  |  | 2-4 | 66 | 51,292 | 17,133 | 39,520 | 48,000 | 62,000 |
|  |  | 5-9 | 95 | 57,304 | 22,173 | 45,000 | 53,200 | 64,944 |
|  |  | 10-14 | 101 | 69,631 | 22,425 | 53,700 | 66,000 | 82,000 |
|  |  | 15-19 | 70 | 76,699 | 22,658 | 61,100 | 73,500 | 87,800 |
|  |  | 20-24 | 115 | 82,807 | 24,897 | 64,400 | 80,500 | 99,120 |
|  |  | 25-29 | 128 | 89,584 | 27,055 | 71,163 | 89,000 | 104,000 |
|  |  | 30-34 | 104 | 92,254 | 46,451 | 65,000 | 86,040 | 106,400 |
|  |  | 35-39 | 48 | 98,064 | 55,540 | 64,001 | 89,000 | 116,000 |
|  |  | 40 or more | 28 | 108,500 | 53,260 | 76,000 | 92,000 | 119,000 |
|  | MS | Total | 627 | 91,290 | 34,515 | 70,000 | 86,940 | 104,000 |
|  |  | 5-9 | 40 | 62,736 | 15,839 | 51,000 | 62,000 | 71,000 |
|  |  | 10-14 | 70 | 70,978 | 18,945 | 60,000 | 72,000 | 82,400 |
|  |  | 15-19 | 72 | 80,219 | 21,688 | 65,000 | 80,100 | 92,772 |
|  |  | 20-24 | 98 | 98,401 | 31,132 | 79,300 | 94,200 | 108,000 |
|  |  | 25-29 | 102 | 95,523 | 28,131 | 80,000 | 91,348 | 111,000 |
|  |  | 30-34 | 117 | 99,911 | 37,086 | 79,430 | 95,279 | 115,000 |
|  |  | 35-39 | 85 | 103,289 | 43,554 | 74,000 | 95,000 | 118,545 |
|  |  | 40 or more | 38 | 100,292 | 45,957 | 85,326 | 98,600 | 110,000 |
|  | PHD | Total | 2048 | 117,955 | 44,914 | 92,000 | 110,000 | 135,000 |
|  |  | 5-9 | 68 | 80,525 | 16,441 | 70,000 | 80,000 | 91,500 |
|  |  | 10-14 | 207 | 93,460 | 21,937 | 81,000 | 94,121 | 105,500 |
|  |  | 15-19 | 282 | 106,064 | 30,158 | 89,300 | 102,000 | 121,650 |
|  |  | 20-24 | 390 | 115,980 | 37,418 | 93,000 | 110,236 | 133,000 |
|  |  | 25-29 | 329 | 125,263 | 41,599 | 98,000 | 118,776 | 145,561 |
|  |  | 30-34 | 331 | 135,856 | 54,271 | 105,000 | 125,000 | 152,000 |
|  |  | 35-39 | 258 | 127,731 | 49,309 | 100,000 | 120,000 | 146,400 |
|  |  | 40 or more | 175 | 123,277 | 59,851 | 90,000 | 115,000 | 143,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.1.3
SALARIES of WOMEN CHEMISTS employed FULL-TIME in INDUSTRY by DEGREE and YEARS SINCE BS

2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| HIGHEST DEGREE | $\begin{aligned} & \text { BA or } \\ & \text { BS } \end{aligned}$ | Total | 400 | 63,677 | 23,721 | 46,000 | 59,000 | 78,000 |
|  |  | 2-4 | 72 | 44,843 | 11,728 | 35,547 | 44,000 | 51,000 |
|  |  | 5-9 | 98 | 54,214 | 14,768 | 45,000 | 52,000 | 61,400 |
|  |  | 10-14 | 69 | 63,862 | 20,325 | 49,000 | 62,000 | 74,000 |
|  |  | 15-19 | 48 | 78,225 | 21,824 | 60,000 | 79,500 | 92,300 |
|  |  | 20-24 | 41 | 69,293 | 21,642 | 48,500 | 69,700 | 84,800 |
|  |  | 25-29 | 29 | 88,429 | 27,805 | 69,675 | 79,857 | 105,000 |
|  |  | 30-34 | 18 | 83,663 | 24,181 | 65,520 | 82,500 | 95,000 |
|  | MS | Total | 274 | 78,367 | 26,428 | 61,000 | 73,000 | 90,200 |
|  |  | 5-9 | 43 | 60,130 | 11,666 | 54,300 | 60,192 | 65,300 |
|  |  | 10-14 | 55 | 73,532 | 17,310 | 61,664 | 69,456 | 83,000 |
|  |  | 15-19 | 42 | 76,173 | 16,140 | 65,800 | 75,000 | 86,000 |
|  |  | 20-24 | 46 | 80,719 | 23,590 | 66,500 | 77,250 | 94,500 |
|  |  | 25-29 | 28 | 81,546 | 22,510 | 64,500 | 77,500 | 90,855 |
|  |  | 30-34 | 33 | 99,650 | 35,016 | 70,000 | 99,711 | 126,600 |
|  | PHD | Total | 402 | 104,196 | 39,612 | 83,400 | 98,000 | 115,222 |
|  |  | 5-9 | 34 | 75,410 | 16,750 | 68,000 | 73,800 | 85,000 |
|  |  | 10-14 | 84 | 89,851 | 23,338 | 74,000 | 88,632 | 99,500 |
|  |  | 15-19 | 75 | 103,773 | 28,451 | 89,000 | 99,526 | 110,000 |
|  |  | 20-24 | 84 | 110,078 | 28,900 | 90,000 | 105,925 | 120,207 |
|  |  | 25-29 | 42 | 124,410 | 39,175 | 96,900 | 110,000 | 140,000 |
|  |  | 30-34 | 43 | 119,042 | 38,209 | 96,700 | 113,000 | 132,362 |
|  |  | 35-39 | 22 | 106,065 | 34,068 | 90,600 | 98,000 | 122,678 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.2.1
SALARIES of BS CHEMISTS employed FULL-TIME in INDUSTRY by WORK SPECIALTY and YEARS SINCE BS 2006 ACS Salary Survey

| SPECIALTY |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Ag/Food chemistry | Total | 52 | 75,249 | 32,882 | 48,850 | 69,600 | 90,405 |
|  | Analytical chemistry | Total | 416 | 67,191 | 27,800 | 48,000 | 63,000 | 81,000 |
|  |  | 2-4 | 51 | 46,067 | 14,206 | 38,000 | 43,208 | 52,500 |
|  |  | 5-9 | 63 | 50,156 | 11,558 | 42,000 | 48,500 | 57,700 |
|  |  | 10-14 | 59 | 66,381 | 20,424 | 52,593 | 65,000 | 75,000 |
|  |  | 15-19 | 43 | 70,618 | 23,293 | 54,000 | 70,550 | 80,106 |
|  |  | 20-24 | 49 | 69,886 | 18,679 | 55,000 | 67,200 | 82,000 |
|  |  | 25-29 | 60 | 77,136 | 30,906 | 58,285 | 71,586 | 92,700 |
|  |  | 30-34 | 47 | 84,570 | 39,409 | 65,000 | 75,000 | 91,000 |
|  |  | 35-39 | 29 | 76,968 | 33,855 | 52,000 | 70,000 | 95,250 |
|  | Biochemistry | Total | 22 | 72,269 | 27,175 | 51,000 | 76,000 | 93,824 |
|  | Biotechnology | Total | 35 | 71,223 | 25,701 | 57,430 | 68,000 | 82,000 |
|  | Chemical education | Total | 31 | 40,303 | 13,249 | 33,900 | 41,500 | 45,000 |
|  | Environmental chemistry | Total | 135 | 65,979 | 30,853 | 46,000 | 61,000 | 80,000 |
|  |  | 5-9 | 17 | 54,200 | 18,302 | 40,000 | 49,000 | 58,000 |
|  |  | 10-14 | 19 | 54,775 | 13,542 | 45,000 | 52,992 | 62,000 |
|  |  | 15-19 | 15 | 68,141 | 17,529 | 55,000 | 65,000 | 76,000 |
|  |  | 20-24 | 24 | 65,901 | 17,178 | 53,560 | 63,000 | 77,280 |
|  |  | 25-29 | 20 | 83,310 | 28,852 | 61,250 | 82,500 | 106,000 |
|  |  | 30-34 | 19 | 69,201 | 26,610 | 44,600 | 76,878 | 84,800 |
|  | Inorganic chemistry | Total | 30 | 58,584 | 18,207 | 45,000 | 54,480 | 69,798 |
|  | Materials science | Total | 47 | 82,062 | 46,100 | 52,000 | 72,428 | 90,000 |
|  | Medicinal-Pharmaceutical | Total | 131 | 76,986 | 28,104 | 54,000 | 72,000 | 92,400 |
|  |  | 2-4 | 20 | 52,969 | 13,152 | 45,000 | 49,600 | 60,000 |
|  |  | 5-9 | 30 | 58,073 | 16,114 | 50,500 | 56,000 | 64,700 |
|  |  | 10-14 | 20 | 75,417 | 19,274 | 66,300 | 68,768 | 84,200 |
|  |  | 20-24 | 18 | 100,718 | 18,559 | 92,400 | 99,120 | 111,684 |
|  | Organic chemistry | Total | 104 | 74,385 | 29,186 | 54,620 | 65,520 | 92,500 |
|  |  | 2-4 | 17 | 51,259 | 11,390 | 42,000 | 53,000 | 59,000 |
|  |  | 5-9 | 18 | 55,704 | 9,967 | 49,700 | 55,000 | 59,080 |
|  | Physical chemistry | Total | 15 | 82,959 | 22,763 | 67,900 | 84,784 | 95,000 |
|  | Polymer chemistry | Total | 118 | 75,266 | 33,554 | 53,000 | 70,847 | 88,400 |
|  |  | 5-9 | 24 | 56,080 | 14,156 | 43,000 | 53,200 | 68,200 |
|  |  | 20-24 | 16 | 85,236 | 23,307 | 68,500 | 86,600 | 98,800 |
|  |  | 25-29 | 19 | 88,871 | 23,981 | 78,000 | 88,400 | 96,200 |
|  | Other chemical science | Total | 39 | 76,393 | 49,104 | 49,700 | 65,000 | 88,700 |
|  | Business Administration | Total | 19 | 100,875 | 52,163 | 66,000 | 97,000 | 117,500 |
|  | Other nonchemistry | Total | 79 | 72,027 | 30,433 | 47,000 | 72,000 | 96,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.2.2

## SALARIES of BS CHEMISTS employed FULL-TIME in INDUSTRY by WORK FUNCTION and YEARS SINCE BS 2006 ACS Salary Survey

| WORK FUNCTION |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Analytical services | Total | 328 | 60,426 | 21,046 | 44,558 | 58,000 | 75,000 |
|  |  | 2-4 | 41 | 45,096 | 12,651 | 35,000 | 43,333 | 48,850 |
|  |  | 5-9 | 57 | 46,465 | 10,834 | 37,000 | 45,500 | 53,000 |
|  |  | 10-14 | 46 | 55,723 | 16,212 | 44,400 | 53,000 | 67,000 |
|  |  | 15-19 | 37 | 66,611 | 20,465 | 49,000 | 67,416 | 79,000 |
|  |  | 20-24 | 51 | 65,403 | 19,075 | 52,500 | 62,000 | 77,700 |
|  |  | 25-29 | 36 | 74,045 | 27,439 | 50,000 | 79,203 | 91,800 |
|  |  | 30-34 | 33 | 72,474 | 18,414 | 62,530 | 72,000 | 82,500 |
|  |  | 35-39 | 18 | 69,051 | 22,279 | 52,000 | 60,100 | 86,000 |
|  | Chemical info <br> Consulting <br> Forensics General mgmt | Total | 18 | 76,252 | 27,984 | 53,000 | 71,600 | 103,000 |
|  |  | Total | 34 | 81,020 | 49,907 | 52,000 | 70,000 | 90,084 |
|  |  | Total | 37 | 65,437 | 28,827 | 46,800 | 61,000 | 87,314 |
|  |  | Total | 84 | 102,367 | 52,630 | 67,200 | 90,000 | 117,900 |
|  |  | 25-29 | 15 | 95,411 | 34,592 | 67,200 | 86,400 | 119,465 |
|  | Health \& Safety Marketing,sales | Total | 57 | 73,930 | 26,417 | 52,992 | 69,700 | 95,913 |
|  |  | Total | 78 | 78,145 | 27,238 | 60,000 | 74,750 | 98,800 |
|  |  | 25-29 | 19 | 81,905 | 25,650 | 70,000 | 80,000 | 100,512 |
|  | Production, QC | Total | 181 | 66,963 | 25,357 | 48,367 | 63,500 | 83,000 |
|  |  | 2-4 | 18 | 41,751 | 14,724 | 32,500 | 40,000 | 46,000 |
|  |  | 5-9 | 32 | 52,227 | 15,119 | 39,700 | 48,367 | 57,000 |
|  |  | 10-14 | 20 | 64,411 | 19,150 | 52,593 | 56,900 | 71,000 |
|  |  | 15-19 | 18 | 71,301 | 20,699 | 53,249 | 69,000 | 83,000 |
|  |  | 20-24 | 28 | 80,459 | 22,519 | 60,000 | 80,340 | 95,000 |
|  |  | 25-29 | 24 | 79,508 | 26,928 | 60,467 | 70,000 | 95,000 |
|  |  | 30-34 | 22 | 70,004 | 17,190 | 59,000 | 64,000 | 84,000 |
|  | Applied Research | Total | 312 | 74,104 | 26,365 | 53,400 | 71,000 | 90,000 |
|  |  | 2-4 | 48 | 51,188 | 14,633 | 40,000 | 50,000 | 55,750 |
|  |  | 5-9 | 56 | 57,466 | 12,828 | 48,140 | 56,000 | 65,209 |
|  |  | 10-14 | 55 | 71,659 | 22,461 | 57,000 | 71,000 | 76,543 |
|  |  | 15-19 | 30 | 79,388 | 18,989 | 68,000 | 75,000 | 89,000 |
|  |  | 20-24 | 38 | 88,405 | 23,775 | 69,000 | 87,700 | 101,900 |
|  |  | 25-29 | 43 | 86,520 | 18,728 | 72,242 | 88,000 | 96,000 |
|  |  | 30-34 | 26 | 100,439 | 33,882 | 85,970 | 96,303 | 120,000 |
|  | Basic Research | Total | 74 | 65,005 | 21,024 | 51,723 | 59,000 | 74,667 |
|  |  | 2-4 | 17 | 50,465 | 10,678 | 37,669 | 54,287 | 59,000 |
|  |  | 5-9 | 20 | 56,478 | 13,533 | 47,020 | 51,723 | 64,700 |
|  | R\&D mgmt | Total | 71 | 101,111 | 45,332 | 75,000 | 96,200 | 114,114 |
|  | Other function | Total | 76 | 70,849 | 29,378 | 46,000 | 72,000 | 87,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.2.3

## SALARIES of BS CHEMISTS employed FULL-TIME in INDUSTRY by INDUSTRY and YEARS SINCE BS 2006 ACS Salary Survey

| NONACADEMIC EMPLOYER |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Aerospace | Total | 25 | 85,864 | 18,985 | 70,906 | 81,866 | 96,200 |
|  | Ag chemicals | Total | 21 | 59,149 | 17,159 | 42,000 | 61,000 | 72,000 |
|  | Basic chemicals | Total | 25 | 25 | 73,306 | 32,329 | 43,333 | 71,000 |
|  | Biochemical | Total | 17 | 68,684 | 22,378 | 48,367 | 64,326 | 82,000 |
|  | Coatings, inks, | Total | 68 | 74,998 | 26,775 | 56,000 | 70,847 | 90,000 |
|  | Electronics/semi | Total | 16 | 93,515 | 46,816 | 61,000 | 72,465 | 106,000 |
|  | Food | Total | 51 | 80,483 | 36,436 | 54,621 | 74,667 | 100,000 |
|  | Instruments | Total | 41 | 77,982 | 42,188 | 54,000 | 67,200 | 87,700 |
|  | Medical devices | Total | 41 | 70,893 | 26,947 | 49,975 | 64,944 | 80,244 |
|  | Metals | Total | 25 | 60,233 | 25,836 | 40,872 | 59,708 | 66,840 |
|  | Personal Care | Total | 20 | 76,131 | 39,390 | 46,000 | 60,467 | 92,500 |
|  | Petroleum | Total | 18 | 74,966 | 26,497 | 54,000 | 75,000 | 95,000 |
|  | Pharmaceuticals | Total | 269 | 78,133 | 28,778 | 57,000 | 73,000 | 95,000 |
|  |  | 2-4 | 40 | 52,795 | 11,129 | 47,000 | 53,000 | 60,000 |
|  |  | 5-9 | 57 | 59,565 | 14,970 | 49,700 | 57,000 | 65,400 |
|  |  | 10-14 | 33 | 79,580 | 17,142 | 67,500 | 82,000 | 88,000 |
|  |  | 15-19 | 32 | 88,712 | 22,537 | 71,000 | 85,000 | 102,210 |
|  |  | 20-24 | 36 | 92,838 | 22,898 | 73,000 | 94,206 | 103,500 |
|  |  | 25-29 | 37 | 92,553 | 23,412 | 71,586 | 92,000 | 108,662 |
|  | Plastics | Total | 34 | 82,978 | 58,456 | 51,250 | 69,000 | 85,970 |
|  | Rubber | Total | 24 | 73,077 | 18,973 | 55,000 | 70,000 | 86,500 |
|  | Soaps | Total | 32 | 72,492 | 37,337 | 49,700 | 57,531 | 86,000 |
|  | Specialty chems | Total | 112 | 70,712 | 36,627 | 45,000 | 62,000 | 87,000 |
|  |  | 5-9 | 18 | 51,497 | 19,042 | 39,700 | 47,000 | 56,000 |
|  |  | 10-14 | 20 | 54,027 | 16,261 | 42,000 | 50,000 | 65,000 |
|  |  | 20-24 | 16 | 76,156 | 21,198 | 61,709 | 69,700 | 82,000 |
|  |  | 25-29 | 18 | 91,895 | 30,930 | 77,256 | 90,660 | 115,222 |
|  | Other | Total | 84 | 69,469 | 30,144 | 48,200 | 63,000 | 84,000 |
|  | manufacturing | 5-9 | 17 | 52,237 | 17,903 | 35,200 | 52,000 | 68,200 |
|  |  | 10-14 | 15 | 75,269 | 33,503 | 49,149 | 70,000 | 76,400 |
|  | Analytical serv | Total | 79 | 53,971 | 19,564 | 38,000 | 50,000 | 65,458 |
|  | lab | 20-24 | 19 | 59,570 | 22,684 | 42,000 | 54,000 | 67,000 |
|  | Biotech research | Total | 21 | 75,332 | 29,318 | 51,000 | 70,000 | 79,000 |
|  | Contract res firm | Total | 16 | 73,574 | 24,605 | 54,500 | 72,000 | 90,405 |
|  | Non-profit | Total | 26 | 72,090 | 28,858 | 45,000 | 62,000 | 100,000 |
|  | Profl services | Total | 45 | 75,118 | 44,712 | 46,000 | 61,250 | 90,084 |
|  | Other nonmanuf | Total | 30 | 61,278 | 30,111 | 35,000 | 62,000 | 75,000 |
|  | Federal Civilian | Total | 52 | 85,883 | 22,102 | 70,000 | 87,000 | 100,000 |
|  | State, local | Total | 84 | 62,175 | 23,262 | 46,779 | 60,000 | 75,000 |
|  |  | 25-29 | 17 | 65,228 | 23,956 | 47,814 | 61,000 | 85,000 |
|  | No answer or acad | 30-34 | 15 | 65,014 | 25,256 | 44,600 | 72,000 | 80,280 |
|  |  | Total | 89 | 48,982 | 22,884 | 34,000 | 43,400 | 61,608 |
|  |  | 2-4 | 15 | 33,122 | 8,114 | 27,000 | 33,900 | 34,833 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.2.4
SALARIES of BS CHEMISTS employed FULL-TIME in INDUSTRY by GEOGRAPHIC REGION and YEARS SINCE BS 2006 ACS Salary Survey


Note: Categories with fewer than 15 cases have been suppressed.

Table 2.2.6
SALARIES of BS CHEMISTS employed FULL-TIME in INDUSTRY by EMPLOYER SIZE and YEARS SINCE BS 2006 ACS Salary Survey


Note: Categories with fewer than 15 cases have been suppressed.

Table 2.3.1
SALARIES of MS CHEMISTS employed FULL-TIME in INDUSTRY by WORK SPECIALTY and YEARS SINCE BS 2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SPECIALTY | Ag/Food chemistry | Total | 35 | 86,174 | 31,750 | 66,000 | 82,200 | 100,819 |
|  | Analytical chemistry | Total | 255 | 81,345 | 26,282 | 63,500 | 77,500 | 95,000 |
|  |  | 5-9 | 21 | 57,192 | 11,028 | 51,000 | 60,000 | 64,345 |
|  |  | 10-14 | 30 | 68,695 | 16,691 | 56,000 | 67,000 | 77,000 |
|  |  | 15-19 | 37 | 75,824 | 18,660 | 61,500 | 78,360 | 88,000 |
|  |  | 20-24 | 30 | 94,147 | 39,330 | 67,200 | 81,274 | 103,000 |
|  |  | 25-29 | 44 | 86,847 | 21,386 | 73,820 | 84,000 | 98,500 |
|  |  | 30-34 | 40 | 88,886 | 23,997 | 73,294 | 82,400 | 103,610 |
|  |  | 35-39 | 35 | 89,338 | 28,985 | 72,671 | 86,940 | 98,500 |
|  | Biochemistry | Total | 23 | 82,067 | 32,936 | 58,847 | 78,661 | 93,600 |
|  | Biotechnology | Total | 35 | 96,297 | 41,907 | 64,101 | 92,000 | 120,000 |
|  | Chemical education | Total | 139 | 56,714 | 19,657 | 41,000 | 52,000 | 69,000 |
|  |  | 10-14 | 18 | 44,090 | 11,395 | 36,400 | 42,000 | 49,000 |
|  |  | 25-29 | 18 | 56,236 | 15,928 | 46,000 | 52,000 | 68,000 |
|  |  | 30-34 | 28 | 59,352 | 19,643 | 42,000 | 56,000 | 69,000 |
|  |  | 35-39 | 23 | 59,239 | 16,470 | 43,029 | 57,911 | 72,000 |
|  |  | 40 or more | 20 | 74,066 | 22,277 | 53,000 | 70,000 | 90,000 |
|  | Environmental chemistry | Total | 102 | 85,234 | 36,497 | 61,000 | 75,000 | 101,700 |
|  |  | 20-24 | 16 | 91,677 | 26,822 | 70,040 | 80,000 | 110,000 |
|  |  | 25-29 | 18 | 89,819 | 37,359 | 61,000 | 81,900 | 109,000 |
|  |  | 30-34 | 24 | 85,135 | 35,626 | 60,250 | 75,000 | 103,600 |
|  |  | 35-39 | 17 | 97,709 | 44,541 | 70,000 | 95,000 | 98,460 |
|  | Inorganic chemistry | Total | 25 | 90,730 | 58,479 | 60,000 | 82,572 | 86,400 |
|  | Materials science | Total | 51 | 83,081 | 23,983 | 68,500 | 85,000 | 96,400 |
|  | Medicinal- | Total | 168 | 85,158 | 29,355 | 69,264 | 80,000 | 92,772 |
|  | Pharmaceutical | 5-9 | 25 | 65,864 | 9,639 | 54,300 | 65,350 | 73,500 |
|  |  | 10-14 | 31 | 75,156 | 16,297 | 63,100 | 76,000 | 82,400 |
|  |  | 15-19 | 33 | 83,977 | 12,990 | 76,556 | 81,960 | 91,000 |
|  |  | 20-24 | 24 | 91,315 | 24,621 | 75,600 | 88,632 | 95,800 |
|  |  | 30-34 | 21 | 105,734 | 33,548 | 70,000 | 100,900 | 134,000 |
|  | Organic chemistry | Total | 84 | 82,016 | 33,862 | 60,000 | 72,000 | 100,000 |
|  | Physical chemistry | Total | 18 | 95,791 | 22,872 | 76,277 | 97,300 | 115,000 |
|  | Polymer chemistry | Total | 97 | 89,096 | 25,154 | 73,549 | 88,600 | 107,000 |
|  |  | 20-24 | 19 | 92,637 | 20,473 | 78,000 | 94,500 | 100,800 |
|  |  | 25-29 | 15 | 96,097 | 28,508 | 82,000 | 98,603 | 109,000 |
|  |  | 30-34 | 17 | 98,806 | 26,866 | 80,000 | 95,000 | 125,900 |
|  | Other chemical science | Total | 52 | 81,758 | 30,325 | 55,000 | 80,000 | 100,000 |
|  | Business Administration | Total | 31 | 113,402 | 46,377 | 86,460 | 103,000 | 135,000 |
|  | Other nonchemistry | Total | 70 | 87,273 | 42,979 | 62,000 | 83,000 | 102,000 |
|  |  | 20-24 | 20 | 87,626 | 45,021 | 63,000 | 77,553 | 94,246 |
|  |  | 25-29 | 16 | 81,630 | 41,142 | 55,000 | 80,000 | 92,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.3.2

## SALARIES of MS CHEMISTS employed FULL-TIME in INDUSTRY by WORK FUNCTION and YEARS SINCE BS 2006 ACS Salary Survey

| WORK FUNCTION |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Analytical services | Total | 167 | 78,148 | 21,429 | 62,500 | 77,000 | 90,000 |
|  |  | 10-14 | 22 | 62,266 | 12,995 | 52,891 | 64,400 | 70,000 |
|  |  | 15-19 | 21 | 75,672 | 13,371 | 60,000 | 78,800 | 87,600 |
|  |  | 20-24 | 21 | 86,033 | 21,193 | 66,500 | 87,000 | 100,000 |
|  |  | 25-29 | 29 | 79,839 | 19,082 | 64,500 | 80,000 | 90,000 |
|  |  | 30-34 | 30 | 88,423 | 19,939 | 74,046 | 84,000 | 104,000 |
|  |  | 35-39 | 20 | 87,499 | 27,153 | 74,000 | 81,000 | 96,292 |
|  | Chemical info <br> Consulting <br> Forensics <br> General mgmt <br> Health \& Safety | Total | 32 | 83,821 | 28,169 | 60,000 | 89,264 | 103,000 |
|  |  | Total | 33 | 111,811 | 51,977 | 72,000 | 105,000 | 139,350 |
|  |  | Total | 17 | 78,288 | 29,167 | 48,500 | 69,384 | 109,700 |
|  |  | Total | 53 | 107,862 | 56,764 | 73,000 | 101,700 | 133,000 |
|  |  | Total | 60 | 89,343 | 32,501 | 63,475 | 84,600 | 110,000 |
|  |  | 20-24 | 16 | 82,133 | 24,645 | 66,000 | 81,000 | 100,547 |
|  | Marketing,sales Production, QC | Total | 51 | 88,454 | 28,221 | 67,000 | 85,000 | 100,850 |
|  |  | Total | 107 | 76,426 | 22,778 | 62,659 | 78,000 | 87,655 |
|  |  | 20-24 | 22 | 89,091 | 26,229 | 77,250 | 79,300 | 100,500 |
|  |  | 30-34 | 20 | 78,559 | 23,042 | 64,258 | 79,430 | 89,600 |
|  | Applied Research | Total | 290 | 80,444 | 23,165 | 63,100 | 77,000 | 92,500 |
|  |  | 5-9 | 38 | 61,991 | 9,952 | 55,400 | 62,000 | 69,264 |
|  |  | 10-14 | 54 | 71,950 | 15,373 | 62,581 | 72,200 | 81,100 |
|  |  | 15-19 | 41 | 76,227 | 17,945 | 62,865 | 73,549 | 85,000 |
|  |  | 20-24 | 45 | 84,000 | 20,117 | 70,000 | 85,000 | 95,600 |
|  |  | 25-29 | 40 | 89,765 | 21,090 | 73,101 | 88,000 | 103,000 |
|  |  | 30-34 | 38 | 93,248 | 25,306 | 76,000 | 90,000 | 103,594 |
|  |  | 35-39 | 21 | 93,587 | 33,906 | 70,000 | 85,000 | 110,096 |
|  | Basic Research | Total | 88 | 81,921 | 20,609 | 67,000 | 80,000 | 93,500 |
|  |  | 5-9 | 20 | 63,175 | 9,272 | 58,000 | 63,000 | 71,000 |
|  |  | 15-19 | 18 | 83,110 | 9,483 | 77,500 | 81,000 | 92,772 |
|  | R\&D mgmt | Total | 102 | 114,018 | 41,762 | 93,064 | 104,000 | 124,500 |
|  |  | 20-24 | 18 | 129,550 | 51,517 | 98,000 | 108,000 | 158,360 |
|  |  | 25-29 | 17 | 107,576 | 16,809 | 97,495 | 106,641 | 112,500 |
|  |  | 30-34 | 19 | 130,185 | 45,465 | 99,802 | 120,000 | 138,488 |
|  | Training Other function | Total | 32 | 64,612 | 23,306 | 43,500 | 62,000 | 72,740 |
|  |  | Total | 49 | 77,335 | 38,594 | 53,179 | 77,553 | 90,848 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.3.3

## SALARIES of MS CHEMISTS employed FULL-TIME in INDUSTRY by INDUSTRY and YEARS SINCE BS 2006 ACS Salary Survey



Note: Categories with fewer than 15 cases have been suppressed.

Table 2.3.4
SALARIES of MS CHEMISTS employed FULL-TIME in INDUSTRY by GEOGRAPHIC REGION and YEARS SINCE BS 2006 ACS Salary Survey

| GEOGRAPHIC REGION |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pacific | Total | 177 | 84,052 | 33,793 | 60,233 | 78,661 | 99,314 |
|  |  | 5-9 | 21 | 57,284 | 16,245 | 53,000 | 58,000 | 63,000 |
|  |  | 10-14 | 24 | 75,579 | 22,321 | 58,000 | 71,500 | 86,000 |
|  |  | 15-19 | 27 | 79,369 | 21,125 | 62,800 | 79,700 | 90,200 |
|  |  | 20-24 | 24 | 92,448 | 31,566 | 68,500 | 88,632 | 110,000 |
|  |  | 25-29 | 21 | 93,919 | 35,421 | 68,000 | 84,521 | 115,000 |
|  |  | 30-34 | 26 | 94,400 | 33,690 | 65,000 | 96,000 | 110,790 |
|  |  | 35-39 | 22 | 98,186 | 48,725 | 72,000 | 89,400 | 107,820 |
|  | Mountain <br> West <br> North <br> West <br> South <br> East <br> North <br> Central | Total | 57 | 73,271 | 28,013 | 49,000 | 70,000 | 85,000 |
|  |  | Total | 63 | 82,933 | 47,808 | 60,000 | 77,000 | 91,000 |
|  |  | 10-14 | 15 | 55,308 | 23,024 | 41,000 | 59,000 | 73,300 |
|  |  | Total | 90 | 73,065 | 29,987 | 48,000 | 70,000 | 94,000 |
|  |  | 25-29 | 16 | 75,717 | 27,815 | 48,000 | 88,045 | 94,600 |
|  |  | Total | 244 | 81,849 | 26,235 | 65,000 | 79,300 | 96,000 |
|  |  | 5-9 | 17 | 60,563 | 13,033 | 49,000 | 59,990 | 72,400 |
|  |  | 10-14 | 30 | 72,747 | 17,916 | 62,000 | 71,000 | 84,000 |
|  |  | 15-19 | 35 | 77,688 | 18,905 | 65,800 | 76,000 | 80,900 |
|  |  | 20-24 | 28 | 88,616 | 30,625 | 70,000 | 81,274 | 96,000 |
|  |  | 25-29 | 38 | 82,837 | 24,929 | 65,676 | 84,000 | 94,000 |
|  |  | 30-34 | 48 | 86,209 | 28,725 | 68,000 | 82,400 | 101,954 |
|  |  | 35-39 | 28 | 90,852 | 32,205 | 70,000 | 85,034 | 105,242 |
|  |  | 40 or more | 16 | 94,199 | 21,568 | 86,400 | 98,600 | 107,500 |
|  | East <br> Middle <br> Atlantic | Total | 30 | 70,294 | 23,485 | 51,000 | 63,000 | 89,900 |
|  |  | Total | 276 | 81,716 | 30,773 | 61,000 | 78,000 | 95,279 |
|  |  | 5-9 | 29 | 60,401 | 10,548 | 53,179 | 60,318 | 65,350 |
|  |  | 10-14 | 31 | 64,391 | 14,859 | 55,395 | 62,000 | 76,000 |
|  |  | 15-19 | 26 | 76,937 | 19,362 | 63,000 | 78,360 | 87,600 |
|  |  | 20-24 | 40 | 87,033 | 34,363 | 66,000 | 82,400 | 95,810 |
|  |  | 25-29 | 39 | 85,900 | 30,018 | 62,000 | 84,000 | 105,000 |
|  |  | 30-34 | 55 | 90,066 | 33,934 | 73,294 | 85,000 | 99,000 |
|  |  | 35-39 | 28 | 91,739 | 40,174 | 66,000 | 86,940 | 98,500 |
|  |  | 40 or more | 22 | 95,271 | 26,004 | 78,000 | 93,000 | 117,850 |
|  | South Atlantic | Total | 193 | 85,032 | 37,557 | 62,000 | 79,000 | 103,000 |
|  |  | 5-9 | 16 | 63,312 | 20,634 | 48,500 | 62,108 | 71,847 |
|  |  | 10-14 | 29 | 64,847 | 16,385 | 52,250 | 65,000 | 73,175 |
|  |  | 15-19 | 22 | 74,212 | 25,319 | 55,400 | 65,000 | 91,000 |
|  |  | 20-24 | 35 | 94,563 | 39,253 | 70,040 | 94,000 | 103,000 |
|  |  | 25-29 | 25 | 87,942 | 30,039 | 75,000 | 87,700 | 109,000 |
|  |  | 30-34 | 23 | 108,446 | 53,360 | 64,102 | 103,594 | 114,200 |
|  |  | 35-39 | 30 | 98,452 | 40,261 | 71,000 | 96,400 | 110,000 |
|  | New England | Total | 106 | 87,217 | 37,319 | 62,400 | 77,250 | 104,000 |
|  |  | 20-24 | 17 | 100,640 | 37,533 | 74,000 | 100,800 | 115,000 |
|  |  | 25-29 | 15 | 90,692 | 35,911 | 62,254 | 87,000 | 118,000 |
|  |  | 30-34 | 25 | 90,902 | 33,136 | 55,000 | 95,000 | 121,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.3.6
SALARIES of MS CHEMISTS employed FULL-TIME in INDUSTRY by EMPLOYER SIZE and YEARS SINCE BS 2006 ACS Salary Survey

| $\begin{aligned} & \text { EMPLOYER } \\ & \text { SIZE } \end{aligned}$ |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Less } \\ & \text { than } 50 \end{aligned}$ | Total | 94 | 80,303 | 45,277 | 52,000 | 67,000 | 96,400 |
|  |  | 20-24 | 15 | 107,315 | 58,381 | 72,000 | 84,000 | 117,000 |
|  |  | 30-34 | 23 | 92,542 | 42,454 | 60,000 | 95,279 | 114,200 |
|  | 50 to 100 to 499 | Total | 54 | 74,562 | 26,140 | 56,200 | 69,000 | 91,000 |
|  |  | Total | 118 | 77,290 | 33,992 | 56,000 | 71,847 | 86,400 |
|  |  | 5-9 | 18 | 55,701 | 14,796 | 51,000 | 53,000 | 71,847 |
|  |  | 10-14 | 19 | 60,145 | 14,441 | 48,500 | 56,000 | 65,000 |
|  |  | 20-24 | 17 | 81,056 | 35,541 | 60,000 | 73,000 | 100,000 |
|  |  | 25-29 | 15 | 102,713 | 28,749 | 82,000 | 94,000 | 122,745 |
|  | $\begin{aligned} & 500 \text { to } \\ & 2,499 \end{aligned}$ | Total | 141 | 84,788 | 27,874 | 65,676 | 79,900 | 100,000 |
|  |  | 10-14 | 17 | 65,634 | 12,782 | 55,000 | 67,725 | 71,500 |
|  |  | 15-19 | 17 | 73,136 | 18,579 | 60,000 | 73,500 | 78,661 |
|  |  | 20-24 | 31 | 103,178 | 34,534 | 78,520 | 92,437 | 115,000 |
|  |  | 25-29 | 21 | 83,607 | 21,876 | 67,854 | 81,099 | 96,070 |
|  |  | 35-39 | 25 | 86,333 | 27,609 | 69,666 | 88,500 | 104,000 |
|  | $\begin{aligned} & 2,500 \\ & \text { to } \\ & 9,999 \end{aligned}$ | Total | 141 | 90,047 | 31,537 | 68,000 | 87,100 | 100,850 |
|  |  | 10-14 | 20 | 74,838 | 23,146 | 59,615 | 76,900 | 85,000 |
|  |  | 15-19 | 23 | 80,934 | 17,110 | 64,544 | 86,000 | 92,000 |
|  |  | 20-24 | 15 | 91,883 | 36,071 | 66,000 | 84,000 | 92,000 |
|  |  | 25-29 | 30 | 87,868 | 21,408 | 73,101 | 87,700 | 98,500 |
|  |  | 30-34 | 21 | 105,978 | 51,532 | 82,200 | 89,600 | 110,620 |
|  |  | 35-39 | 18 | 107,398 | 25,661 | 88,107 | 101,565 | 120,000 |
|  | $\begin{aligned} & 10,000 \\ & \text { to } \\ & 24,999 \end{aligned}$ | Total | 123 | 88,001 | 28,794 | 67,000 | 85,000 | 102,000 |
|  |  | 10-14 | 18 | 77,547 | 11,039 | 71,000 | 74,631 | 84,000 |
|  |  | 20-24 | 22 | 88,465 | 24,005 | 73,850 | 88,632 | 94,500 |
|  |  | 25-29 | 18 | 100,701 | 37,207 | 82,920 | 105,000 | 115,000 |
|  |  | 30-34 | 18 | 100,532 | 26,005 | 83,000 | 90,000 | 109,552 |
|  | $\begin{aligned} & 25,000 \\ & \text { or more } \end{aligned}$ | Total | 280 | 88,980 | 27,722 | 71,600 | 85,000 | 100,900 |
|  |  | 5-9 | 30 | 66,470 | 9,361 | 60,192 | 65,000 | 73,500 |
|  |  | 10-14 | 39 | 70,176 | 18,340 | 62,000 | 69,500 | 78,000 |
|  |  | 15-19 | 35 | 85,811 | 18,850 | 76,000 | 85,000 | 94,500 |
|  |  | 20-24 | 50 | 89,981 | 21,275 | 75,018 | 92,000 | 101,500 |
|  |  | 25-29 | 35 | 96,940 | 20,089 | 87,000 | 90,855 | 109,803 |
|  |  | 30-34 | 51 | 104,074 | 32,556 | 86,000 | 100,000 | 110,790 |
|  |  | 35-39 | 26 | 105,968 | 38,966 | 79,682 | 96,400 | 115,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.4.1
SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY by WORK SPECIALTY and YEARS SINCE BS 2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SPECIALTY | Ag/Food chemistry | Total | 108 | 104,881 | 32,033 | 84,200 | 105,000 | 122,000 |
|  |  | 20-24 | 15 | 97,401 | 28,954 | 65,000 | 103,594 | 116,000 |
|  |  | 25-29 | 16 | 105,855 | 20,040 | 90,450 | 105,000 | 112,000 |
|  |  | 30-34 | 22 | 117,342 | 20,670 | 100,000 | 117,371 | 128,500 |
|  |  | 35-39 | 20 | 112,218 | 37,492 | 90,000 | 118,000 | 126,675 |
|  |  | 40 or more | 20 | 112,312 | 39,652 | 85,000 | 100,000 | 139,774 |
|  | Analytical chemistry | Total | 564 | 95,196 | 33,020 | 73,300 | 92,688 | 113,300 |
|  |  | 5-9 | 27 | 67,309 | 17,456 | 52,000 | 67,450 | 73,840 |
|  |  | 10-14 | 62 | 76,010 | 30,753 | 50,000 | 74,650 | 96,500 |
|  |  | 15-19 | 78 | 91,189 | 29,372 | 74,000 | 92,500 | 106,283 |
|  |  | 20-24 | 107 | 100,076 | 30,525 | 80,000 | 99,000 | 117,437 |
|  |  | 25-29 | 91 | 99,534 | 38,057 | 75,000 | 97,000 | 116,000 |
|  |  | 30-34 | 68 | 105,935 | 32,275 | 79,950 | 105,000 | 132,000 |
|  |  | 35-39 | 74 | 98,642 | 31,031 | 76,143 | 98,000 | 116,000 |
|  |  | 40 or more | 56 | 101,888 | 30,614 | 83,093 | 92,000 | 120,000 |
|  | Biochemistry | Total | 288 | 102,468 | 55,623 | 60,100 | 91,720 | 129,000 |
|  |  | 10-14 | 35 | 64,678 | 21,629 | 46,000 | 58,300 | 77,200 |
|  |  | 15-19 | 39 | 70,922 | 27,775 | 50,210 | 64,575 | 81,000 |
|  |  | 20-24 | 33 | 93,276 | 32,854 | 64,000 | 90,000 | 115,000 |
|  |  | 25-29 | 46 | 117,734 | 69,965 | 58,831 | 95,279 | 155,000 |
|  |  | 30-34 | 38 | 112,121 | 42,179 | 79,961 | 107,000 | 144,000 |
|  |  | 35-39 | 32 | 146,684 | 64,894 | 100,500 | 132,607 | 168,000 |
|  |  | 40 or more | 51 | 121,410 | 59,084 | 82,000 | 118,828 | 148,000 |
|  | Biotechnology | Total | 220 | 124,830 | 50,460 | 90,000 | 115,000 | 150,000 |
|  |  | 10-14 | 22 | 97,991 | 35,899 | 71,353 | 89,000 | 109,500 |
|  |  | 15-19 | 40 | 113,449 | 45,156 | 90,000 | 104,000 | 120,000 |
|  |  | 20-24 | 36 | 125,507 | 42,132 | 98,000 | 112,800 | 140,000 |
|  |  | 25-29 | 26 | 130,964 | 48,813 | 92,000 | 120,000 | 160,646 |
|  |  | 30-34 | 37 | 145,007 | 56,055 | 110,000 | 140,000 | 179,068 |
|  |  | 35-39 | 18 | 145,644 | 66,177 | 112,000 | 134,359 | 210,497 |
|  |  | 40 or more | 26 | 142,437 | 44,459 | 109,156 | 139,595 | 163,793 |
|  | Chemical education | Total | 320 | 64,498 | 21,048 | 49,700 | 61,250 | 77,000 |
|  |  | 10-14 | 37 | 48,136 | 12,625 | 41,000 | 46,000 | 54,000 |
|  |  | 15-19 | 34 | 50,348 | 7,127 | 46,128 | 50,000 | 53,786 |
|  |  | 20-24 | 39 | 59,452 | 15,857 | 46,107 | 55,532 | 64,030 |
|  |  | 25-29 | 41 | 69,191 | 24,567 | 52,000 | 64,000 | 76,000 |
|  |  | 30-34 | 40 | 65,584 | 19,037 | 51,225 | 67,300 | 79,800 |
|  |  | 35-39 | 50 | 69,255 | 18,557 | 55,000 | 69,800 | 82,500 |
|  |  | 40 or more | 71 | 77,299 | 22,596 | 62,000 | 76,000 | 87,494 |
|  | Clinical chemistryEnvironmental chemistry | Total | 35 | 109,349 | 39,192 | 76,000 | 106,000 | 132,000 |
|  |  | Total | 171 | 96,374 | 39,072 | 70,000 | 91,000 | 117,000 |
|  |  | 10-14 | 16 | 68,703 | 22,004 | 56,348 | 64,000 | 80,000 |
|  |  | 15-19 | 15 | 80,503 | 28,554 | 60,000 | 73,467 | 93,700 |
|  |  | 20-24 | 16 | 89,592 | 22,887 | 75,500 | 88,000 | 93,500 |
|  |  | 25-29 | 29 | 98,178 | 28,545 | 75,500 | 103,000 | 112,000 |
|  |  | 30-34 | 25 | 104,940 | 42,805 | 70,000 | 98,000 | 140,703 |
|  |  | 35-39 | 34 | 116,161 | 47,530 | 84,500 | 105,500 | 143,200 |
|  |  | 40 or more | 27 | 101,103 | 39,677 | 73,000 | 96,000 | 124,000 |
|  | Inorganic chemistry | Total | 168 | 90,609 | 38,655 | 61,700 | 87,000 | 111,725 |
|  |  | 10-14 | 22 | 65,443 | 20,377 | 52,000 | 63,000 | 84,000 |
|  |  | 15-19 | 20 | 70,914 | 20,194 | 54,000 | 63,000 | 90,000 |
|  |  | 20-24 | 28 | 94,629 | 39,735 | 64,249 | 81,240 | 116,000 |
|  |  | 25-29 | 28 | 103,045 | 38,159 | 83,250 | 100,000 | 120,000 |
|  |  | 30-34 | 17 | 90,104 | 30,965 | 63,000 | 90,000 | 111,898 |
|  |  | 35-39 | 15 | 104,971 | 41,840 | 84,600 | 102,000 | 117,000 |
|  |  | 40 or more | 27 | 112,410 | 43,683 | 76,838 | 108,000 | 139,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.4.1
SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY by WORK SPECIALTY and YEARS SINCE BS 2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SPECIALTY | Materials science | Total | 295 | 103,948 | 41,593 | 82,000 | 99,300 | 120,000 |
|  |  | 5-9 | 16 | 67,269 | 18,176 | 47,500 | 72,100 | 77,500 |
|  |  | 10-14 | 51 | 85,724 | 19,177 | 75,000 | 85,000 | 100,000 |
|  |  | 15-19 | 54 | 96,165 | 25,974 | 82,000 | 93,600 | 110,000 |
|  |  | 20-24 | 61 | 104,772 | 30,018 | 91,466 | 103,703 | 115,000 |
|  |  | 25-29 | 37 | 116,684 | 29,820 | 90,072 | 110,000 | 140,000 |
|  |  | 30-34 | 28 | 137,759 | 86,354 | 93,900 | 120,000 | 143,976 |
|  |  | 35-39 | 28 | 117,640 | 37,759 | 96,000 | 123,000 | 134,900 |
|  |  | 40 or more | 20 | 108,192 | 44,840 | 80,000 | 109,000 | 140,000 |
|  | Medicinal- <br> Pharmaceutical | Total | 569 | 121,793 | 51,739 | 92,000 | 111,000 | 142,000 |
|  |  | 5-9 | 24 | 85,360 | 17,643 | 75,000 | 90,000 | 96,000 |
|  |  | 10-14 | 90 | 90,134 | 26,583 | 75,000 | 95,500 | 105,000 |
|  |  | 15-19 | 113 | 108,668 | 29,747 | 91,181 | 108,564 | 126,000 |
|  |  | 20-24 | 114 | 122,939 | 44,811 | 95,000 | 117,500 | 142,000 |
|  |  | 25-29 | 80 | 138,157 | 48,119 | 106,000 | 130,954 | 160,000 |
|  |  | 30-34 | 67 | 147,290 | 56,250 | 111,000 | 148,553 | 170,617 |
|  |  | 35-39 | 44 | 154,834 | 83,925 | 91,000 | 130,000 | 180,000 |
|  |  | 40 or more | 34 | 142,444 | 69,030 | 105,000 | 120,000 | 180,000 |
|  | Organic chemistry | Total | 521 | 99,084 | 47,138 | 71,000 | 92,205 | 116,000 |
|  |  | 5-9 | 30 | 70,142 | 20,105 | 50,198 | 75,000 | 89,000 |
|  |  | 10-14 | 63 | 78,199 | 25,904 | 55,000 | 78,000 | 98,589 |
|  |  | 15-19 | 79 | 80,126 | 27,211 | 58,000 | 75,500 | 97,000 |
|  |  | 20-24 | 91 | 94,095 | 29,076 | 72,000 | 95,000 | 113,000 |
|  |  | 25-29 | 59 | 103,923 | 39,764 | 80,000 | 98,200 | 123,000 |
|  |  | 30-34 | 69 | 119,864 | 53,667 | 89,439 | 113,000 | 142,000 |
|  |  | 35-39 | 57 | 113,160 | 51,425 | 85,000 | 97,000 | 126,000 |
|  |  | 40 or more | 69 | 114,940 | 50,533 | 81,300 | 100,000 | 137,300 |
|  | Physical chemistry | Total | 281 | 91,302 | 36,843 | 63,000 | 86,700 | 117,000 |
|  |  | 10-14 | 30 | 58,947 | 22,428 | 44,902 | 58,000 | 69,000 |
|  |  | 15-19 | 34 | 69,257 | 22,593 | 53,179 | 63,000 | 83,000 |
|  |  | 20-24 | 43 | 91,160 | 38,331 | 66,593 | 76,928 | 103,806 |
|  |  | 25-29 | 51 | 92,089 | 30,622 | 66,000 | 89,000 | 113,333 |
|  |  | 30-34 | 21 | 119,157 | 37,632 | 93,537 | 120,000 | 136,191 |
|  |  | 35-39 | 38 | 112,822 | 36,350 | 85,100 | 110,000 | 132,948 |
|  |  | 40 or more | 54 | 101,099 | 33,563 | 78,243 | 93,000 | 125,000 |
|  | Polymer chemistry | Total | 329 | 103,250 | 30,586 | 84,900 | 100,000 | 120,000 |
|  |  | 5-9 | 18 | 75,199 | 12,419 | 72,000 | 73,000 | 83,700 |
|  |  | 10-14 | 43 | 80,378 | 18,849 | 71,000 | 84,048 | 89,000 |
|  |  | 15-19 | 38 | 89,477 | 20,368 | 82,000 | 90,000 | 101,268 |
|  |  | 20-24 | 55 | 102,992 | 23,740 | 85,000 | 101,900 | 115,698 |
|  |  | 25-29 | 57 | 112,123 | 30,003 | 88,212 | 106,000 | 134,000 |
|  |  | 30-34 | 53 | 119,747 | 32,681 | 96,000 | 112,000 | 132,948 |
|  |  | 35-39 | 41 | 110,527 | 27,994 | 96,024 | 113,500 | 129,200 |
|  |  | 40 or more | 20 | 123,320 | 41,002 | 110,000 | 120,000 | 135,000 |
|  | Other chemical science | Total | 111 | 99,421 | 32,593 | 75,610 | 95,000 | 120,000 |
|  |  | 25-29 | 15 | 118,344 | 44,041 | 90,214 | 106,026 | 137,000 |
|  |  | 30-34 | 22 | 100,748 | 32,431 | 80,000 | 97,000 | 121,856 |
|  |  | 35-39 | 19 | 110,364 | 31,656 | 89,000 | 103,000 | 124,600 |
|  |  | 40 or more | 22 | 98,296 | 26,195 | 77,553 | 92,900 | 119,000 |
|  | Business Administration | Total | 52 | 147,469 | 78,054 | 108,000 | 132,200 | 160,000 |
|  | Computer science | Total | 40 | 106,222 | 35,356 | 82,000 | 93,000 | 129,000 |
|  | Law | Total | 54 | 156,413 | 84,617 | 105,000 | 137,000 | 177,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.4.1
SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY by WORK SPECIALTY and YEARS SINCE BS

2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th $\%$-ile | 75th \%-ile |
| :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| SPECIALTY | Other nonchemistry | Total | 208 | 119,570 | 60,287 | 84,000 | 110,000 | 141,850 |
|  | $10-14$ | 21 | 85,055 | 27,719 | 68,000 | 84,000 | 100,000 |  |
|  | $20-24$ | 34 | 114,357 | 60,410 | 75,000 | 105,000 | 125,000 |  |
|  | $25-29$ | 21 | 120,469 | 60,188 | 80,000 | 101,000 | 159,000 |  |
|  | $30-34$ | 37 | 122,131 | 38,173 | 87,524 | 120,000 | 144,027 |  |
|  | $35-39$ | 38 | 137,352 | 70,812 | 99,600 | 122,678 | 153,000 |  |
|  |  | 40 or more | 43 | 131,362 | 74,771 | 92,205 | 120,000 | 150,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.4.2
SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY by WORK FUNCTION and YEARS SINCE BS 2006 ACS Salary Survey

| WORK FUNCTION |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Analytical services | Total | 246 | 94,048 | 28,776 | 75,000 | 92,205 | 108,000 |
|  |  | 5-9 | 16 | 69,127 | 14,654 | 53,500 | 72,000 | 80,000 |
|  |  | 10-14 | 25 | 82,864 | 23,515 | 68,848 | 83,000 | 95,723 |
|  |  | 15-19 | 28 | 93,141 | 23,298 | 82,533 | 93,600 | 103,000 |
|  |  | 20-24 | 47 | 97,577 | 32,198 | 80,000 | 96,000 | 110,119 |
|  |  | 25-29 | 41 | 101,951 | 30,572 | 82,800 | 100,550 | 112,000 |
|  |  | 30-34 | 33 | 101,567 | 28,313 | 78,000 | 101,000 | 117,000 |
|  |  | 35-39 | 34 | 96,957 | 29,137 | 75,000 | 93,288 | 116,000 |
|  |  | 40 or more | 22 | 87,990 | 25,621 | 75,000 | 85,300 | 100,500 |
|  | Chemical info Computers Consulting | Total | 47 | 87,169 | 23,434 | 65,000 | 90,000 | 101,000 |
|  |  | Total | 29 | 103,312 | 33,516 | 75,000 | 91,000 | 131,500 |
|  |  | Total | 58 | 118,975 | 70,396 | 75,000 | 112,400 | 146,000 |
|  |  | 40 or more | 19 | 106,187 | 64,234 | 48,000 | 105,000 | 147,000 |
|  | Forensics General mgmt | Total | 20 | 117,844 | 105,535 | 76,000 | 91,000 | 113,000 |
|  |  | Total | 139 | 132,053 | 71,634 | 90,000 | 118,828 | 151,200 |
|  |  | 20-24 | 16 | 160,545 | 81,753 | 98,800 | 125,000 | 205,000 |
|  |  | 25-29 | 18 | 132,464 | 55,460 | 90,000 | 124,000 | 159,000 |
|  |  | 30-34 | 28 | 144,204 | 72,457 | 103,000 | 132,200 | 180,000 |
|  |  | 35-39 | 25 | 123,578 | 51,363 | 80,704 | 117,000 | 147,000 |
|  |  | 40 or more | 28 | 139,404 | 103,096 | 90,000 | 118,000 | 142,450 |
|  | Health \& Safety | Total | 78 | 107,505 | 35,847 | 90,242 | 108,000 | 125,300 |
|  |  | 35-39 | 18 | 109,895 | 31,435 | 97,976 | 114,000 | 129,000 |
|  |  | 40 or more | 19 | 105,662 | 54,816 | 76,000 | 109,000 | 124,000 |
|  | Marketing,sales | Total | 85 | 104,667 | 34,894 | 80,000 | 100,000 | 121,000 |
|  |  | 20-24 | 16 | 115,917 | 41,753 | 93,000 | 105,000 | 133,680 |
|  | Patents | Total | 49 | 145,704 | 52,198 | 107,000 | 137,000 | 170,000 |
|  | Production, QC | Total | 138 | 102,004 | 30,885 | 83,750 | 96,000 | 119,600 |
|  |  | 15-19 | 15 | 89,307 | 20,128 | 78,887 | 92,500 | 95,791 |
|  |  | 20-24 | 24 | 102,179 | 29,588 | 83,750 | 92,800 | 112,680 |
|  |  | 25-29 | 23 | 105,237 | 33,060 | 84,000 | 97,000 | 120,000 |
|  |  | 30-34 | 21 | 103,422 | 22,930 | 84,000 | 105,039 | 120,000 |
|  |  | 35-39 | 22 | 99,941 | 31,723 | 85,000 | 96,400 | 119,600 |
|  | Applied Research | Total | 1096 | 102,712 | 28,090 | 87,000 | 100,000 | 116,000 |
|  |  | 5-9 | 64 | 76,592 | 14,470 | 68,000 | 77,700 | 87,000 |
|  |  | 10-14 | 171 | 88,716 | 18,375 | 77,200 | 91,000 | 100,300 |
|  |  | 15-19 | 200 | 99,699 | 28,218 | 86,000 | 96,845 | 112,000 |
|  |  | 20-24 | 206 | 100,802 | 21,713 | 87,400 | 100,000 | 114,000 |
|  |  | 25-29 | 149 | 110,775 | 28,178 | 93,900 | 107,000 | 125,000 |
|  |  | 30-34 | 123 | 114,750 | 26,665 | 95,000 | 113,000 | 132,000 |
|  |  | 35-39 | 104 | 113,433 | 30,483 | 96,303 | 110,000 | 130,000 |
|  |  | 40 or more | 72 | 119,217 | 35,323 | 96,000 | 117,000 | 134,460 |
|  | Basic Research | Total | 336 | 105,788 | 36,302 | 85,000 | 105,360 | 123,000 |
|  |  | 5-9 | 30 | 81,150 | 23,550 | 68,000 | 85,000 | 96,387 |
|  |  | 10-14 | 59 | 86,453 | 23,192 | 74,000 | 90,000 | 104,500 |
|  |  | 15-19 | 54 | 98,462 | 25,436 | 85,086 | 104,900 | 112,000 |
|  |  | 20-24 | 56 | 110,031 | 24,905 | 95,065 | 111,000 | 124,000 |
|  |  | 25-29 | 44 | 112,947 | 33,101 | 85,000 | 109,000 | 140,149 |
|  |  | 30-34 | 36 | 127,386 | 47,181 | 105,000 | 120,000 | 151,000 |
|  |  | 35-39 | 22 | 122,991 | 32,554 | 109,000 | 123,000 | 132,607 |
|  |  | 40 or more | 34 | 123,513 | 54,165 | 100,000 | 110,000 | 146,746 |

Note: Categories with fewer than 15 cases have been suppressed.

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Table 2.4.2

## SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY by WORK FUNCTION and YEARS SINCE BS 2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50 th $\%$-ile | 75th \%-ile |
| :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| WORK | R\&D mgmt | Total | 623 | 144,639 | 48,171 | 115,000 | 137,380 | 163,969 |
| FUNCTION |  | 32 | 109,814 | 24,862 | 98,000 | 107,000 | 116,330 |  |
|  | $10-14$ | 78 | 124,104 | 29,120 | 101,000 | 125,220 | 145,000 |  |
|  | $15-19$ | 137 | 137,220 | 35,947 | 115,000 | 130,588 | 156,000 |  |
|  | $20-24$ | 117 | 150,888 | 46,355 | 120,000 | 142,000 | 172,832 |  |
|  | $25-29$ | 128 | 158,552 | 59,428 | 125,000 | 147,000 | 173,830 |  |
|  | $30-34$ | 79 | 162,530 | 56,635 | 125,000 | 146,243 | 187,789 |  |
|  |  | $35-39$ | 48 | 145,455 | 42,919 | 119,000 | 142,000 | 164,000 |
|  |  | 40 or more | 97 | 72,834 | 29,658 | 50,000 | 68,000 | 87,000 |
|  | Training | Total | 18 | 88,288 | 32,295 | 70,000 | 86,000 | 113,560 |
|  | $35-39$ | 30 | 85,712 | 35,120 | 60,000 | 77,553 | 99,500 |  |
|  |  | 40 or more | 126 | 124,050 | 80,076 | 79,000 | 105,000 | 138,488 |
|  | Other function | Total | 18 | 100,562 | 48,323 | 78,887 | 87,524 | 120,000 |
|  | $30-34$ | 19 | 156,426 | 91,543 | 97,000 | 132,000 | 157,000 |  |
|  |  | 18 | 160,351 | 127,561 | 83,093 | 115,000 | 150,000 |  |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.4.3
SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY by INDUSTRY and YEARS SINCE BS 2006 ACS Salary Survey


Note: Categories with fewer than 15 cases have been suppressed.

Table 2.4.3

## SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY by INDUSTRY and YEARS SINCE BS 2006 ACS Salary Survey



Note: Categories with fewer than 15 cases have been suppressed.

Table 2.4.4

## SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY by GEOGRAPHIC REGION and YEARS SINCE BS 2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { GEOGRAPHIC } \\ & \text { REGION } \end{aligned}$ | Pacific | Total | 808 | 115,743 | 54,329 | 82,000 | 105,000 | 140,000 |
|  |  | 5-9 | 31 | 78,383 | 22,705 | 60,935 | 82,600 | 95,000 |
|  |  | 10-14 | 115 | 84,458 | 27,791 | 65,000 | 87,000 | 101,927 |
|  |  | 15-19 | 115 | 104,747 | 32,473 | 87,083 | 104,989 | 125,414 |
|  |  | 20-24 | 140 | 117,166 | 46,483 | 82,000 | 108,000 | 146,100 |
|  |  | 25-29 | 106 | 130,416 | 55,687 | 95,000 | 127,409 | 157,200 |
|  |  | 30-34 | 101 | 129,817 | 59,058 | 88,000 | 124,000 | 160,000 |
|  |  | 35-39 | 107 | 136,167 | 79,142 | 86,570 | 110,790 | 168,000 |
|  |  | 40 or more | 88 | 123,978 | 53,781 | 83,093 | 117,000 | 150,000 |
|  | Mountain | Total | 188 | 94,591 | 33,983 | 72,895 | 89,856 | 114,000 |
|  |  | 10-14 | 33 | 76,276 | 20,582 | 60,000 | 73,100 | 93,000 |
|  |  | 15-19 | 22 | 83,022 | 23,964 | 56,000 | 85,000 | 99,000 |
|  |  | 20-24 | 26 | 104,732 | 40,345 | 75,600 | 98,000 | 120,000 |
|  |  | 25-29 | 30 | 98,733 | 33,936 | 77,500 | 85,000 | 116,900 |
|  |  | 30-34 | 20 | 100,619 | 29,289 | 83,200 | 98,000 | 114,000 |
|  |  | 35-39 | 28 | 100,059 | 41,920 | 55,000 | 100,100 | 124,000 |
|  |  | 40 or more | 22 | 109,627 | 35,302 | 87,494 | 106,643 | 120,000 |
|  | West North Central | Total | 258 | 95,550 | 50,155 | 65,000 | 90,000 | 115,000 |
|  |  | 10-14 | 34 | 73,483 | 29,206 | 52,045 | 65,000 | 90,000 |
|  |  | 15-19 | 44 | 82,589 | 30,469 | 60,000 | 82,000 | 104,000 |
|  |  | 20-24 | 28 | 89,369 | 28,953 | 64,000 | 85,000 | 108,000 |
|  |  | 25-29 | 37 | 105,118 | 51,508 | 71,000 | 95,000 | 120,000 |
|  |  | 30-34 | 36 | 110,639 | 39,124 | 78,300 | 100,000 | 145,000 |
|  |  | 35-39 | 29 | 111,296 | 26,015 | 83,000 | 115,000 | 133,000 |
|  |  | 40 or more | 36 | 112,884 | 94,173 | 67,521 | 91,000 | 120,000 |
|  | West South Central | Total | 279 | 90,268 | 54,348 | 55,000 | 79,000 | 110,124 |
|  |  | 10-14 | 32 | 62,537 | 37,252 | 39,858 | 48,000 | 81,000 |
|  |  | 15-19 | 49 | 79,053 | 45,849 | 53,000 | 73,200 | 96,000 |
|  |  | 20-24 | 40 | 83,112 | 39,229 | 52,000 | 72,398 | 110,000 |
|  |  | 25-29 | 34 | 90,637 | 44,067 | 60,000 | 74,000 | 121,500 |
|  |  | 30-34 | 29 | 94,960 | 34,307 | 65,000 | 90,000 | 120,000 |
|  |  | 35-39 | 34 | 109,400 | 44,815 | 84,600 | 107,000 | 147,500 |
|  |  | 40 or more | 47 | 119,871 | 87,025 | 70,000 | 89,000 | 125,000 |
|  | East North Central | Total | 698 | 102,625 | 46,503 | 72,000 | 99,000 | 123,300 |
|  |  | 5-9 | 28 | 62,366 | 18,363 | 47,000 | 60,000 | 73,800 |
|  |  | 10-14 | 68 | 76,673 | 22,270 | 56,000 | 73,000 | 97,200 |
|  |  | 15-19 | 105 | 90,183 | 31,275 | 60,500 | 93,500 | 110,000 |
|  |  | 20-24 | 127 | 100,814 | 32,349 | 80,000 | 100,000 | 121,000 |
|  |  | 25-29 | 104 | 113,786 | 40,087 | 90,000 | 110,000 | 138,488 |
|  |  | 30-34 | 107 | 123,248 | 61,065 | 88,500 | 115,000 | 143,000 |
|  |  | 35-39 | 79 | 103,356 | 34,252 | 74,000 | 98,000 | 123,000 |
|  |  | 40 or more | 77 | 110,593 | 51,537 | 76,838 | 103,680 | 134,460 |
|  | East South Central | Total | 154 | 80,500 | 48,248 | 50,000 | 70,000 | 96,000 |
|  |  | 10-14 | 19 | 49,553 | 17,879 | 42,000 | 44,000 | 48,920 |
|  |  | 15-19 | 21 | 67,948 | 23,516 | 49,000 | 58,439 | 90,000 |
|  |  | 20-24 | 26 | 81,947 | 25,707 | 56,840 | 81,000 | 96,000 |
|  |  | 25-29 | 24 | 76,431 | 31,353 | 52,366 | 75,650 | 92,800 |
|  |  | 30-34 | 18 | 92,807 | 53,131 | 60,841 | 75,000 | 114,000 |
|  |  | 35-39 | 15 | 120,805 | 88,660 | 80,000 | 96,024 | 128,000 |
|  |  | 40 or more | 22 | 98,088 | 59,913 | 65,042 | 76,000 | 109,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.4.4
SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY by GEOGRAPHIC REGION and YEARS SINCE BS 2006 ACS Salary Survey

| GEOGRAPHIC REGION |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Middle Atlantic | Total | 825 | 101,269 | 42,811 | 73,047 | 95,000 | 120,000 |
|  |  | 5-9 | 44 | 73,924 | 21,960 | 54,000 | 77,000 | 89,000 |
|  |  | 10-14 | 98 | 80,095 | 29,830 | 59,000 | 81,150 | 96,000 |
|  |  | 15-19 | 102 | 89,356 | 34,180 | 59,562 | 88,000 | 110,000 |
|  |  | 20-24 | 133 | 98,958 | 32,194 | 75,100 | 97,000 | 116,000 |
|  |  | 25-29 | 120 | 110,450 | 42,491 | 84,200 | 102,000 | 133,500 |
|  |  | 30-34 | 107 | 124,585 | 59,317 | 90,000 | 119,000 | 147,000 |
|  |  | 35-39 | 92 | 114,576 | 47,407 | 81,000 | 106,500 | 132,000 |
|  |  | 40 or more | 125 | 101,559 | 37,934 | 75,000 | 93,500 | 121,500 |
|  | South Atlantic | Total | 750 | 100,356 | 39,265 | 77,000 | 98,000 | 120,000 |
|  |  | 5-9 | 29 | 69,380 | 15,795 | 53,000 | 70,000 | 83,700 |
|  |  | 10-14 | 78 | 76,162 | 27,742 | 53,210 | 76,000 | 93,000 |
|  |  | 15-19 | 89 | 83,498 | 33,684 | 60,000 | 80,000 | 100,000 |
|  |  | 20-24 | 126 | 103,237 | 39,655 | 84,700 | 100,300 | 119,500 |
|  |  | 25-29 | 101 | 97,390 | 29,592 | 80,000 | 98,000 | 114,036 |
|  |  | 30-34 | 108 | 111,943 | 42,626 | 89,000 | 106,641 | 136,191 |
|  |  | 35-39 | 101 | 115,011 | 36,680 | 96,292 | 112,000 | 130,000 |
|  |  | 40 or more | 113 | 113,666 | 43,542 | 84,755 | 117,000 | 139,770 |
|  | New England | Total | 410 | 106,020 | 41,166 | 79,950 | 100,400 | 130,000 |
|  |  | 5-9 | 14 | 72,880 | 18,573 | 68,000 | 70,000 | 86,932 |
|  |  | 10-14 | 59 | 82,482 | 24,178 | 61,000 | 83,500 | 100,400 |
|  |  | 15-19 | 59 | 98,487 | 30,800 | 75,500 | 98,000 | 116,000 |
|  |  | 20-24 | 61 | 104,951 | 34,170 | 80,000 | 99,000 | 130,000 |
|  |  | 25-29 | 60 | 115,383 | 41,465 | 88,400 | 107,000 | 145,000 |
|  |  | 30-34 | 51 | 130,621 | 58,213 | 95,000 | 120,000 | 145,000 |
|  |  | 35-39 | 53 | 112,409 | 40,609 | 86,000 | 110,000 | 129,200 |
|  |  | 40 or more | 51 | 108,558 | 38,942 | 80,000 | 106,000 | 130,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.4.6
SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY by EMPLOYER SIZE and YEARS SINCE BS 2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { EMPLOYER } \\ & \text { SIZE } \end{aligned}$ | $\begin{aligned} & \text { Less } \\ & \text { than } 50 \end{aligned}$ | Total | 296 | 110,364 | 63,193 | 71,000 | 93,288 | 135,000 |
|  |  | 10-14 | 41 | 84,248 | 25,813 | 66,624 | 80,000 | 98,000 |
|  |  | 15-19 | 36 | 92,587 | 39,565 | 60,000 | 85,000 | 99,711 |
|  |  | 20-24 | 46 | 109,321 | 54,790 | 71,715 | 90,000 | 132,948 |
|  |  | 25-29 | 43 | 137,187 | 58,630 | 92,205 | 124,000 | 160,000 |
|  |  | 30-34 | 37 | 109,139 | 58,999 | 65,000 | 100,000 | 150,000 |
|  |  | 35-39 | 34 | 119,252 | 85,535 | 68,727 | 91,000 | 147,000 |
|  |  | 40 or more | 46 | 127,451 | 87,559 | 76,000 | 105,000 | 150,000 |
|  | $\begin{aligned} & 50 \text { to } \\ & 99 \end{aligned}$ | Total | 132 | 108,790 | 47,817 | 79,000 | 93,264 | 122,112 |
|  |  | 10-14 | 19 | 90,107 | 28,267 | 71,500 | 86,000 | 92,500 |
|  |  | 15-19 | 26 | 100,557 | 28,152 | 84,000 | 97,000 | 110,000 |
|  |  | 20-24 | 32 | 112,137 | 51,114 | 80,000 | 92,000 | 120,000 |
|  |  | 40 or more | 15 | 120,889 | 58,263 | 75,000 | 105,000 | 143,000 |
|  | $\begin{aligned} & 100 \text { to } \\ & 499 \end{aligned}$ | Total | 318 | 103,445 | 45,357 | 72,000 | 95,000 | 120,207 |
|  |  | 5-9 | 16 | 65,819 | 18,562 | 52,000 | 63,000 | 75,000 |
|  |  | 10-14 | 35 | 87,134 | 29,431 | 68,000 | 86,000 | 103,367 |
|  |  | 15-19 | 40 | 99,892 | 55,004 | 65,000 | 92,000 | 117,500 |
|  |  | 20-24 | 60 | 106,707 | 35,586 | 81,120 | 100,000 | 120,510 |
|  |  | 25-29 | 45 | 109,459 | 46,013 | 76,500 | 100,937 | 134,600 |
|  |  | 30-34 | 46 | 117,390 | 38,503 | 93,600 | 111,000 | 140,000 |
|  |  | 35-39 | 25 | 101,938 | 38,096 | 71,800 | 96,000 | 117,000 |
|  |  | 40 or more | 49 | 107,973 | 61,691 | 66,593 | 90,000 | 135,000 |
|  | $\begin{aligned} & 500 \text { to } \\ & 2,499 \end{aligned}$ | Total | 343 | 105,930 | 44,342 | 78,000 | 100,000 | 123,000 |
|  |  | 10-14 | 40 | 90,140 | 28,409 | 72,000 | 85,000 | 106,000 |
|  |  | 15-19 | 40 | 96,061 | 42,005 | 72,504 | 93,500 | 105,000 |
|  |  | 20-24 | 64 | 111,387 | 41,138 | 84,100 | 103,587 | 126,005 |
|  |  | 25-29 | 47 | 110,723 | 35,861 | 90,000 | 105,000 | 130,656 |
|  |  | 30-34 | 50 | 116,002 | 58,235 | 79,950 | 103,680 | 132,200 |
|  |  | 35-39 | 46 | 116,942 | 47,354 | 90,000 | 108,120 | 133,000 |
|  |  | 40 or more | 43 | 101,220 | 47,029 | 75,800 | 96,000 | 125,000 |
|  | $\begin{aligned} & 2,500 \\ & \text { to } \\ & 9,999 \end{aligned}$ | Total | 464 | 112,985 | 44,437 | 87,780 | 105,000 | 132,846 |
|  |  | 5-9 | 22 | 78,393 | 13,073 | 72,100 | 77,353 | 84,500 |
|  |  | 10-14 | 48 | 84,323 | 21,314 | 69,960 | 85,000 | 100,128 |
|  |  | 15-19 | 59 | 93,546 | 22,857 | 79,000 | 94,484 | 104,000 |
|  |  | 20-24 | 79 | 111,118 | 28,653 | 93,000 | 112,680 | 130,000 |
|  |  | 25-29 | 72 | 117,352 | 33,581 | 92,000 | 110,188 | 139,500 |
|  |  | 30-34 | 57 | 126,818 | 38,138 | 94,500 | 116,291 | 149,788 |
|  |  | 35-39 | 68 | 131,190 | 52,689 | 100,500 | 116,000 | 139,774 |
|  |  | 40 or more | 58 | 132,204 | 72,823 | 100,500 | 124,477 | 150,431 |
|  |  | Total | 368 | 113,969 | 42,584 | 90,000 | 108,000 | 127,000 |
|  |  | 5-9 | 15 | 76,765 | 13,549 | 71,127 | 76,000 | 80,000 |
|  |  | 10-14 | 45 | 86,564 | 21,129 | 75,000 | 90,000 | 99,100 |
|  |  | 15-19 | 51 | 102,361 | 22,625 | 87,000 | 100,000 | 115,000 |
|  |  | 20-24 | 63 | 116,884 | 42,458 | 95,238 | 108,120 | 121,140 |
|  |  | 25-29 | 66 | 121,350 | 49,333 | 97,900 | 116,000 | 140,885 |
|  |  | 30-34 | 49 | 139,517 | 56,239 | 106,641 | 125,000 | 146,381 |
|  |  | 35-39 | 42 | 122,682 | 36,479 | 97,976 | 116,100 | 143,200 |
|  |  | 40 or more | 34 | 118,531 | 34,080 | 100,000 | 111,800 | 134,460 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 2.4.6
SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY by EMPLOYER SIZE and YEARS SINCE BS 2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| EMPLOYER | 25,000 | Total | 888 | 118,525 | 41,198 | 95,500 | 110,000 | 135,000 |
| SIZE | or | $5-9$ | 39 | 80,491 | 15,680 | 70,000 | 85,000 | 91,500 |
|  | more | $10-14$ | 106 | 95,243 | 19,195 | 86,500 | 97,000 | 105,500 |
|  |  | $15-19$ | 153 | 112,041 | 24,026 | 96,500 | 110,000 | 125,878 |
|  |  | $20-24$ | 157 | 113,990 | 28,130 | 94,495 | 110,000 | 130,000 |
|  | $25-29$ | 131 | 126,661 | 35,019 | 101,000 | 120,000 | 147,000 |  |
|  |  | $30-34$ | 146 | 139,342 | 57,676 | 109,000 | 129,000 | 153,700 |
|  |  | $35-39$ | 106 | 125,263 | 34,457 | 103,578 | 123,000 | 139,900 |
|  |  | 40 or more | 45 | 128,213 | 41,590 | 100,500 | 120,800 | 144,027 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 3.1.1
SALARIES of GOVERNMENTAL CHEMISTS employed FULL-TIME by DEGREE and YEARS SINCE BS 2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| HIGHEST | BA or | Total | 146 | 69,142 | 25,617 | 50,000 | 68,519 | 86,000 |
| DEGREE | BS | $20-24$ | 17 | 68,507 | 17,974 | 53,040 | 68,000 | 80,280 |
|  |  | $25-29$ | 29 | 78,232 | 25,991 | 50,000 | 82,500 | 96,500 |
|  | $30-34$ | 27 | 74,726 | 26,462 | 64,000 | 75,000 | 87,314 |  |
|  | MS | Total | 108 | 79,639 | 22,994 | 63,000 | 80,000 | 97,461 |
|  |  | $10-14$ | 15 | 56,339 | 17,090 | 47,500 | 52,000 | 63,000 |
|  |  | $25-29$ | 17 | 87,308 | 23,856 | 67,854 | 86,000 | 106,641 |
|  | $30-34$ | 23 | 79,209 | 17,865 | 64,102 | 79,548 | 90,000 |  |
|  | $35-39$ | 22 | 90,864 | 20,306 | 72,890 | 83,384 | 104,000 |  |
|  | PHD | Total | 331 | 104,547 | 31,219 | 84,000 | 100,550 | 125,000 |
|  | $10-14$ | 28 | 85,370 | 20,408 | 74,650 | 84,240 | 95,410 |  |
|  |  | $15-19$ | 25 | 86,754 | 19,615 | 73,720 | 85,086 | 99,000 |
|  | $20-24$ | 39 | 106,744 | 34,757 | 90,000 | 97,500 | 120,000 |  |
|  | $25-29$ | 53 | 104,771 | 26,748 | 87,400 | 100,550 | 117,437 |  |
|  | $30-34$ | 40 | 107,153 | 31,871 | 89,000 | 105,039 | 136,000 |  |
|  |  | 57 | 110,907 | 32,248 | 87,780 | 112,000 | 129,023 |  |
|  |  | 75 | 115,691 | 31,662 | 98,537 | 118,828 | 139,000 |  |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.1.1
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by CONTRACT STATUS and RANK 2006 ACS Salary Survey

|  |  |  |  | Count | Mean | Std Dev | 25th $\%$-ile | 50th $\%$-ile | 75th $\%$-ile |
| :--- | :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| CONTRACT | $9-10$ | RANK | Full professor | 408 | 93,333 | 31,569 | 73,000 | 86,460 | 102,500 |
| LENGTH | month |  | Assoc professor | 234 | 62,413 | 13,232 | 52,790 | 60,000 | 70,000 |
|  |  |  | Asst professor | 221 | 53,960 | 11,035 | 45,150 | 52,045 | 60,228 |
|  |  |  | Instructor, adjunct | 55 | 60,289 | 39,716 | 40,000 | 49,500 | 63,000 |
|  |  |  | No ranks | 22 | 56,709 | 18,753 | 44,000 | 56,000 | 70,000 |
|  |  |  | Secondary teacher | 33 | 60,867 | 16,412 | 50,000 | 61,000 | 73,457 |
|  | $11-12$ | RANK | Full professor | 164 | 133,421 | 60,516 | 96,992 | 124,477 | 160,000 |
|  | month |  | Assoc professor | 44 | 88,538 | 38,990 | 70,380 | 82,000 | 99,250 |
|  |  |  | Asst professor | 73 | 67,938 | 27,244 | 50,000 | 63,000 | 81,500 |
|  |  | Instructor, adjunct | 39 | 55,769 | 19,828 | 43,029 | 50,000 | 64,000 |  |
|  |  | Research appt | 137 | 68,012 | 36,544 | 44,500 | 62,000 | 83,000 |  |
|  |  |  | Other nonfaculty | 73 | 74,709 | 37,273 | 46,254 | 68,000 | 92,500 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.2.1
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and YEARS SINCE PhD - 9 or 10 Month Contract 2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RANK | Full professor | Total | 401 | 93,124 | 31,608 | 72,740 | 86,405 | 102,450 |
|  |  | 10-14 | 16 | 77,982 | 39,369 | 50,000 | 67,000 | 86,000 |
|  |  | 15-19 | 47 | 84,199 | 21,412 | 68,000 | 81,000 | 95,000 |
|  |  | 20-24 | 64 | 90,060 | 27,880 | 70,000 | 86,058 | 100,000 |
|  |  | 25-29 | 59 | 86,231 | 27,396 | 68,000 | 79,600 | 93,703 |
|  |  | 30-34 | 83 | 96,535 | 33,335 | 75,000 | 88,960 | 103,000 |
|  |  | 35-39 | 92 | 100,537 | 35,682 | 75,000 | 87,000 | 120,000 |
|  |  | 40+ | 39 | 101,451 | 30,620 | 84,000 | 93,000 | 102,000 |
|  | Assoc professor | Total | 234 | 62,413 | 13,232 | 52,790 | 60,000 | 70,000 |
|  |  | 5-9 | 37 | 57,730 | 11,745 | 49,500 | 56,000 | 64,074 |
|  |  | 10-14 | 81 | 61,072 | 12,827 | 50,268 | 57,800 | 67,300 |
|  |  | 15-19 | 57 | 65,148 | 13,251 | 56,030 | 63,000 | 72,398 |
|  |  | 20-24 | 23 | 62,631 | 12,808 | 53,821 | 60,000 | 70,000 |
|  | Asst professor | Total | 219 | 54,030 | 11,054 | 45,500 | 53,000 | 60,228 |
|  |  | 2-4 | 53 | 51,311 | 10,651 | 44,000 | 48,000 | 56,400 |
|  |  | 5-9 | 100 | 54,500 | 11,587 | 47,000 | 53,000 | 62,000 |
|  |  | 10-14 | 38 | 57,176 | 11,209 | 49,000 | 57,753 | 63,000 |
|  | Instructor, | Total | 55 | 60,289 | 39,716 | 40,000 | 49,500 | 63,000 |
|  | No ranks | Total | 20 | 54,230 | 17,605 | 43,500 | 51,225 | 65,600 |
|  | Secondary | Total | 33 | 60,867 | 16,412 | 50,000 | 61,000 | 73,457 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.2.2
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and YEARS SINCE PhD - 11 or 12 Month Contract 2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: | 75th \%-ile 1

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.3.1
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and ACADEMIC WORK FUNCTION -9 or 10 Month Contract 2006 ACS Salary Survey


Note: Categories with fewer than 15 cases have been suppressed.

Table 4.3.2
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and ACADEMIC WORK FUNCTION - 11 or 12 Month Contract 2006 ACS Salary Survey


Note: Categories with fewer than 15 cases have been suppressed.

Table 4.4.1
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and SPECIALTY - 9 or 10 Month Contract 2006 ACS Salary Survey

| SPECIALTY |  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Analytical chemistry | RANK | Full professor | 37 | 93,122 | 27,174 | 75,000 | 88,000 | 100,913 |
|  |  |  | Assoc professor | 21 | 62,873 | 14,315 | 51,000 | 58,530 | 72,398 |
|  |  |  | Asst professor | 21 | 51,475 | 8,620 | 43,000 | 48,920 | 60,000 |
|  | Biochemistry | RANK | Full professor | 29 | 102,103 | 38,280 | 73,368 | 91,000 | 125,000 |
|  |  |  | Assoc professor | 25 | 61,635 | 13,733 | 50,713 | 58,601 | 65,400 |
|  |  |  | Asst professor | 28 | 57,108 | 10,023 | 49,000 | 57,358 | 63,500 |
|  | Chemical education | RANK | Full professor | 95 | 77,052 | 16,589 | 66,813 | 76,185 | 86,460 |
|  |  |  | Assoc professor | 58 | 59,538 | 13,275 | 52,000 | 55,450 | 63,000 |
|  |  |  | Asst professor | 44 | 48,861 | 8,296 | 43,039 | 47,127 | 54,000 |
|  |  |  | Instructor, adjunct | 19 | 48,538 | 12,975 | 36,540 | 47,739 | 52,000 |
|  |  |  | No ranks | 18 | 58,910 | 19,780 | 50,000 | 57,844 | 72,000 |
|  |  |  | Secondary teacher | 22 | 58,907 | 18,236 | 46,000 | 60,000 | 76,000 |
|  | Environmental chemistry Inorganic chemistry | RANK RANK | Full professor | 15 | 113,554 | 35,069 | 85,000 | 107,000 | 130,000 |
|  |  |  | Full professor | 32 | 93,210 | 29,640 | 78,000 | 92,205 | 108,000 |
|  |  |  | Assoc professor | 22 | 58,973 | 8,050 | 52,300 | 56,840 | 64,249 |
|  |  |  | Asst professor | 24 | 54,796 | 9,366 | 49,000 | 54,000 | 61,700 |
|  | Materials science | RANK | Full professor | 20 | 117,268 | 43,640 | 88,000 | 105,000 | 123,000 |
|  | Organic chemistry | RANK | Full professor | 59 | 92,721 | 28,048 | 72,895 | 87,854 | 102,000 |
|  |  |  | Assoc professor | 36 | 63,813 | 11,544 | 53,000 | 63,000 | 74,250 |
|  |  |  | Asst professor | 36 | 52,423 | 7,536 | 46,000 | 50,500 | 59,000 |
|  | Physical chemistry | RANK | Full professor | 62 | 96,636 | 29,237 | 76,831 | 89,250 | 115,000 |
|  |  |  | Assoc professor | 35 | 65,926 | 15,908 | 55,000 | 65,000 | 72,000 |
|  |  |  | Asst professor | 18 | 54,316 | 15,008 | 48,400 | 58,700 | 60,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.4.2
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and SPECIALTY - 11 or 12 Month Contract 2006 ACS Salary Survey

|  |  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SPECIALTY | Analytical chemistry | RANK | Research appt | 22 | 62,218 | 19,567 | 50,000 | 56,000 | 73,300 |
|  | Biochemistry | RANK | Full professor | 46 | 141,588 | 53,422 | 112,000 | 140,000 | 169,000 |
|  |  |  | Asst professor | 17 | 75,576 | 20,588 | 52,366 | 77,250 | 95,000 |
|  |  |  | Research appt | 17 | 63,047 | 26,293 | 42,000 | 48,000 | 85,470 |
|  | Chemical education | RANK | Full professor | 15 | 86,572 | 30,837 | 65,000 | 75,194 | 105,000 |
|  | Medicinal- | RANK | Full professor | 19 | 147,733 | 93,175 | 87,716 | 111,000 | 165,000 |
|  | Pharmaceutical |  | Research appt | 23 | 63,606 | 33,703 | 41,000 | 58,000 | 74,000 |
|  | Physical chemistry | RANK | Full professor | 15 | 114,698 | 38,460 | 84,000 | 124,000 | 131,385 |
|  |  |  | Research appt | 16 | 59,352 | 22,196 | 38,000 | 57,000 | 76,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.5.1
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and TENURE - 9 or 10 Month Contract 2006 ACS Salary Survey

|  |  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :--- | :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| TENURE | Yes | RANK | Full professor | 397 | 93,987 | 31,609 | 74,000 | 87,000 | 105,000 |
|  |  |  | Assoc professor | 211 | 63,205 | 12,939 | 53,000 | 60,100 | 70,800 |
|  |  |  | Asst professor | 17 | 59,327 | 7,803 | 52,045 | 59,000 | 61,750 |
|  | No, in | RANK | Assoc professor | 16 | 57,622 | 14,865 | 48,471 | 54,000 | 62,000 |
|  | tenure |  | Asst professor | 192 | 53,746 | 10,840 | 45,150 | 51,512 | 60,000 |
|  | No, no | RANK | Instructor, adjunct | 44 | 56,495 | 32,421 | 38,600 | 49,500 | 54,250 |
|  | Not | RANK | Secondary teacher | 17 | 55,855 | 18,246 | 40,000 | 53,200 | 70,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.5.2
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and TENURE - 11 or 12 Month Contract 2006 ACS Salary Survey

|  |  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50 th \%-ile | 75 th $\%$-ile |
| :--- | :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| TENURE | Yes | RANK | Full professor | 138 | 139,638 | 59,248 | 101,000 | 130,000 | 164,696 |
|  |  |  | Assoc professor | 22 | 90,957 | 43,171 | 70,380 | 81,240 | 97,000 |
|  | No, in | RANK | Asst professor | 43 | 67,510 | 23,466 | 50,000 | 63,000 | 81,000 |
|  | No, no | RANK | Asst professor | 23 | 60,739 | 21,423 | 50,000 | 57,881 | 76,000 |
|  | tenure |  | Instructor, adjunct | 26 | 58,173 | 17,332 | 44,800 | 53,000 | 70,000 |
|  | track |  | Research appt | 82 | 69,686 | 39,313 | 48,000 | 62,000 | 83,531 |
|  |  |  | Other nonfaculty | 23 | 70,790 | 44,708 | 45,000 | 62,000 | 80,000 |
|  | Not | RANK | Research appt | 55 | 65,516 | 32,164 | 42,000 | 61,000 | 76,000 |
|  | applicable |  | Other nonfaculty | 48 | 76,260 | 34,308 | 48,000 | 66,732 | 104,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.6.1
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and INSTITUTIONAL CONTROL - 9 or 10 Month Contract 2006 ACS Salary Survey

|  |  |  |  | Count | Mean | Std Dev | 25th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| INSTITUTIONAL CONTROL | Public | RANK | Full professor | 242 | 96,416 | 32,661 | 75,000 |
|  |  |  | Assoc professor | 124 | 63,668 | 13,481 | 53,274 |
|  |  |  | Asst professor | 130 | 55,357 | 11,792 | 48,400 |
|  |  |  | Instructor, adjunct | 36 | 65,992 | 46,419 | 40,000 |
|  |  |  | No ranks | 22 | 56,709 | 18,753 | 44,000 |
|  |  |  | Secondary teacher | 21 | 62,238 | 15,675 | 53,200 |
|  | Private | RANK | Full professor | 165 | 88,855 | 29,515 | 70,774 |
|  |  |  | Assoc professor | 110 | 60,997 | 12,860 | 51,000 |
|  |  |  | Asst professor | 91 | 51,963 | 9,565 | 45,000 |
|  |  |  | Instructor, adjunct | 18 | 49,454 | 19,361 | 39,000 |
|  |  |  | Secondary teacher | 12 | 58,469 | 18,081 | 48,561 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.6.1
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and INSTITUTIONAL CONTROL - 9 or 10 Month Contract 2006 ACS Salary Survey

|  |  |  |  | 50th \%-ile | 75th \%-ile |
| :--- | :--- | :--- | :--- | ---: | ---: |
| INSTITUTIONAL | Public | RANK | Full professor | 90,400 | 107,500 |
| CONTROL |  |  | Assoc professor | 62,000 | 72,000 |
|  |  |  | Asst professor | 55,000 | 61,000 |
|  |  |  | Instructor, adjunct | 50,000 | 68,524 |
|  |  |  | No ranks | 56,000 | 70,000 |
|  |  |  | Secondary teacher | 64,611 | 73,457 |
|  |  |  |  | Frivate | RANK |
|  |  | Full professor | 82,040 | 97,000 |  |
|  |  |  | Assoc professor | 58,000 | 67,600 |
|  |  | Asst professor | 50,000 | 59,500 |  |
|  |  | Instructor, adjunct | 48,000 | 50,325 |  |
|  |  |  | Secondary teacher | 55,000 | 65,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.6.2
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and INSTITUTIONAL CONTROL - 11 or 12 Month Contract 2006 ACS Salary Survey

|  |  |  |  | Count | Mean | Std Dev | 25th $\%$-ile | 50th \%-ile | 75th \%-ile |
| :--- | :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| INSTITUTIONAL | Public | RANK | Full professor | 107 | 130,871 | 57,358 | 98,000 | 124,000 | 150,000 |
| CONTROL |  | Assoc professor | 23 | 91,352 | 30,091 | 76,000 | 82,400 | 102,000 |  |
|  |  | Asst professor | 36 | 69,029 | 30,509 | 51,500 | 70,000 | 81,150 |  |
|  |  | Instructor, adjunct | 20 | 56,472 | 21,284 | 43,796 | 51,000 | 65,000 |  |
|  |  | Research appt | 91 | 67,798 | 37,472 | 45,117 | 62,200 | 77,862 |  |
|  |  | Other nonfaculty | 43 | 75,732 | 40,303 | 51,000 | 66,732 | 91,520 |  |
|  |  |  | Private | RANK | Full professor | 57 | 138,208 | 66,307 | 86,570 |
|  |  | Assoc professor | 21 | 85,456 | 47,469 | 54,000 | 80,000 | 169,000 |  |
|  |  | Asst professor | 37 | 66,876 | 24,025 | 50,000 | 58,300 | 95,500 |  |
|  |  | Instructor, adjunct | 19 | 55,030 | 18,727 | 43,000 | 48,000 | 60,000 |  |
|  |  | Research appt | 46 | 68,434 | 35,037 | 42,000 | 57,000 | 90,000 |  |
|  |  |  | Other nonfaculty | 29 | 74,734 | 32,603 | 42,000 | 74,891 | 105,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.7.1
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and TYPE OF INSTITUTION - 9 or 10 Month Contract 2006 ACS Salary Survey

| INSTITUTIONAL TYPE |  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AA-granting | RANK | Full professor | 39 | 69,853 | 15,135 | 56,348 | 69,000 | 84,000 |
|  |  |  | Assoc professor | 19 | 56,638 | 15,629 | 44,000 | 53,260 | 64,074 |
|  |  |  | No ranks | 22 | 56,709 | 18,753 | 44,000 | 56,000 | 70,000 |
|  | BS-granting | RANK | Full professor | 145 | 79,488 | 18,829 | 68,500 | 76,540 | 90,000 |
|  |  |  | Assoc professor | 108 | 57,838 | 9,649 | 50,000 | 56,030 | 62,251 |
|  |  |  | Asst professor | 108 | 49,487 | 7,824 | 44,000 | 47,800 | 54,000 |
|  | MS-granting | RANK | Full professor | 29 | 83,749 | 15,367 | 75,000 | 84,000 | 92,205 |
|  |  |  | Assoc professor | 35 | 60,605 | 10,669 | 52,469 | 58,000 | 65,000 |
|  |  |  | Asst professor | 24 | 54,988 | 10,181 | 48,552 | 52,000 | 57,556 |
|  | PhD-granting | RANK | Full professor | 189 | 109,291 | 34,636 | 85,034 | 100,800 | 125,000 |
|  |  |  | Assoc professor | 68 | 71,552 | 13,992 | 60,200 | 71,000 | 76,928 |
|  |  |  | Asst professor | 67 | 60,636 | 11,897 | 55,000 | 60,000 | 65,000 |
|  |  |  | Instructor, adjunct | 17 | 72,625 | 42,278 | 48,480 | 54,250 | 75,000 |
|  | High school | RANK | Secondary teacher | 32 | 60,451 | 16,496 | 50,000 | 60,000 | 71,250 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.7.2
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and TYPE OF INSTITUTION - 11 or 12 Month Contract 2006 ACS Salary Survey

|  |  |  |  | Count | Mean | Std Dev | 25th $\%$-ile | 50 th $\%$-ile | 75th $\%$-ile |
| :--- | :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| INSTITUTIONAL | BS-granting | RANK | Full professor | 23 | 93,740 | 63,697 | 57,000 | 80,000 | 108,000 |
| TYPE |  | Asst professor | 16 | 52,032 | 13,177 | 42,000 | 49,482 | 58,000 |  |
|  |  | PhD-granting | RANK | Full professor | 73 | 138,073 | 55,618 | 101,000 | 133,000 |
|  |  |  | Asst professor | 164,696 |  |  |  |  |  |
|  |  |  | Instructor, adjunct | 25 | 68,056 | 25,649 | 51,500 | 74,000 | 84,000 |
|  |  |  | 24 | 60,831 | 17,967 | 46,103 | 55,000 | 70,000 |  |
|  |  |  | Research appt | 104 | 69,467 | 40,100 | 44,000 | 61,000 | 83,352 |
|  |  |  | Other nonfaculty | 47 | 76,829 | 39,384 | 51,000 | 68,699 | 97,000 |
|  | Medical | RANK | Full professor | 50 | 156,277 | 62,873 | 120,000 | 145,434 | 188,000 |
|  | school |  | Assoc professor | 20 | 98,020 | 47,533 | 75,800 | 86,005 | 106,000 |
|  |  |  | Asst professor | 27 | 80,095 | 31,218 | 58,300 | 75,000 | 88,000 |
|  |  |  | Research appt | 27 | 64,246 | 21,432 | 52,800 | 63,724 | 75,813 |
|  |  |  | Other nonfaculty | 16 | 69,998 | 35,343 | 37,000 | 60,000 | 90,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.8.1
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK, INST CONTROL and TYPE OF INSTITUTION - 9 or 10 Month Contract
2006 ACS Salary Survey

| - | NonPhD-granting |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| INSTITUTIONAL CONTROL |  | RANK | Full professor | 100 | 77,262 | 16,204 | 67,000 | 77,000 | 90,000 |
|  | PhD-granting |  | Assoc professor | 68 | 58,376 | 11,237 | 50,000 | 55,729 | 64,074 |
|  |  | RANK | Asst professor | 72 | 50,859 | 8,728 | 44,100 | 50,000 | 55,000 |
|  |  |  | Instructor, adjunct | 22 | 56,045 | 44,320 | 36,900 | 43,000 | 54,000 |
|  |  |  | No ranks | 22 | 56,709 | 18,753 | 44,000 | 56,000 | 70,000 |
|  |  |  | Full professor | 136 | 109,276 | 34,359 | 86,405 | 102,000 | 125,000 |
|  |  |  | Assoc professor | 52 | 69,809 | 13,556 | 60,000 | 69,000 | 75,000 |
|  |  |  | Asst professor | 52 | 61,344 | 11,984 | 56,348 | 60,000 | 65,000 |
|  | Secondary School | RANK | Secondary teacher | 20 | 61,639 | 15,835 | 53,200 | 63,400 | 71,250 |
|  | NonPhD-granting | RANK | Full professor | 113 | 79,226 | 19,825 | 66,813 | 76,540 | 88,000 |
|  |  |  | Assoc professor | 94 | 58,237 | 10,384 | 50,000 | 57,000 | 63,000 |
|  |  |  | Asst professor | 74 | 50,229 | 8,208 | 44,825 | 47,928 | 56,000 |
|  | PhD-granting | RANK | Full professor | 52 | 109,781 | 35,866 | 84,600 | 99,000 | 125,000 |
|  |  |  | Assoc professor | 16 | 77,216 | 14,312 | 67,600 | 72,000 | 80,000 |
|  |  |  | Asst professor | 15 | 58,184 | 11,655 | 50,000 | 55,490 | 63,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.8.2
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK, INST CONTROL, and TYPE OF INSTITUTION - 11 or 12 Month Contract 2006 ACS Salary Survey

| INSTITUTIONAL CONTROL |  |  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Public | NonPhD-granting | RANK | Full professor | 22 | 100,047 | 29,033 | 81,000 | 103,000 | 120,000 |
|  |  | PhD-granting | RANK | Full professor | 53 | 127,071 | 50,343 | 96,000 | 122,000 | 151,000 |
|  |  |  |  | Instructor, adjunct | 15 | 63,848 | 17,192 | 50,000 | 60,500 | 70,000 |
|  |  |  |  | Research appt | 72 | 68,665 | 40,912 | 45,000 | 62,000 | 80,000 |
|  |  |  |  | Other nonfaculty | 26 | 75,732 | 43,016 | 51,225 | 63,207 | 92,500 |
|  |  | Medical school | RANK | Full professor | 32 | 158,357 | 70,344 | 120,120 | 143,000 | 167,000 |
|  |  |  |  | Asst professor | 18 | 80,512 | 32,910 | 62,000 | 75,000 | 88,000 |
|  |  |  |  | Research appt | 17 | 64,283 | 19,837 | 48,688 | 63,300 | 74,789 |
|  | Private | NonPhD-granting | RANK | Full professor | 19 | 94,046 | 67,151 | 57,000 | 75,194 | 89,000 |
|  |  |  |  | Asst professor | 15 | 50,424 | 10,831 | 42,000 | 49,482 | 57,000 |
|  |  | PhD-granting | RANK | Full professor | 20 | 167,229 | 59,609 | 120,000 | 159,000 | 188,500 |
|  |  |  |  | Research appt | 32 | 71,271 | 38,785 | 41,000 | 57,000 | 92,205 |
|  |  |  |  | Other nonfaculty | 20 | 80,596 | 34,477 | 42,000 | 76,838 | 105,000 |
|  |  | Medical school | RANK | Full professor | 18 | 152,579 | 48,455 | 110,000 | 145,434 | 188,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.9.1
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and SEX - 9 or 10 Month Contract 2006 ACS Salary Survey


Note: Categories with fewer than 15 cases have been suppressed.

Table 4.9.2
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME

## by RANK and SEX - 11 or 12 Month Contract

 2006 ACS Salary Survey

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.10.1
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and GEOGRAPHIC REGION - 9 or 10 Month Contract 2006 ACS Salary Survey

| GEOGRAPHIC REGION |  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pacific | RANK | Full professor | 70 | 103,848 | 30,523 | 84,000 | 93,000 | 125,000 |
|  |  |  | Assoc professor | 20 | 71,572 | 14,047 | 62,000 | 69,051 | 77,000 |
|  |  |  | Asst professor | 23 | 58,605 | 9,184 | 52,000 | 58,700 | 62,500 |
|  |  |  | Instructor, adjunct | 13 | 75,737 | 55,426 | 49,176 | 53,000 | 75,000 |
|  | West North Central | RANK | Full professor | 29 | 78,948 | 16,383 | 66,576 | 76,831 | 89,250 |
|  |  |  | Assoc professor | 18 | 58,519 | 8,364 | 50,000 | 57,800 | 65,000 |
|  |  |  | Asst professor | 18 | 56,194 | 9,429 | 50,000 | 55,000 | 61,750 |
|  | West South Central | RANK | Full professor | 54 | 82,468 | 33,219 | 68,000 | 75,000 | 88,960 |
|  |  |  | Assoc professor | 21 | 61,506 | 11,460 | 52,300 | 60,000 | 72,000 |
|  |  |  | Asst professor | 25 | 47,994 | 12,884 | 43,000 | 46,300 | 51,360 |
|  | East North Central | RANK | Full professor | 46 | 92,351 | 34,391 | 70,000 | 81,500 | 102,000 |
|  |  |  | Assoc professor | 38 | 61,156 | 13,189 | 50,000 | 59,968 | 65,000 |
|  |  |  | Asst professor | 31 | 52,736 | 10,192 | 46,615 | 50,500 | 55,000 |
|  | East <br> South <br> Central | RANK | Full professor | 18 | 72,273 | 22,282 | 60,841 | 69,000 | 78,000 |
|  |  |  | Assoc professor | 23 | 53,150 | 6,567 | 50,000 | 53,821 | 55,729 |
|  |  |  | Asst professor | 10 | 45,957 | 7,075 | 42,000 | 43,000 | 48,552 |
|  | Middle <br> Atlantic | RANK | Full professor | 80 | 100,866 | 35,702 | 77,400 | 92,604 | 110,000 |
|  |  |  | Assoc professor | 54 | 63,019 | 12,405 | 53,000 | 60,000 | 71,242 |
|  |  |  | Asst professor | 50 | 56,041 | 12,206 | 46,000 | 54,000 | 61,000 |
|  | South Atlantic | RANK | Full professor | 46 | 91,802 | 27,125 | 72,000 | 84,755 | 110,000 |
|  |  |  | Assoc professor | 28 | 64,819 | 17,181 | 54,000 | 62,000 | 72,400 |
|  |  |  | Asst professor | 27 | 50,856 | 9,540 | 43,039 | 49,176 | 59,000 |
|  | New England | RANK | Full professor | 45 | 97,003 | 26,264 | 79,000 | 91,075 | 106,000 |
|  |  |  | Assoc professor | 16 | 71,037 | 13,573 | 58,000 | 72,000 | 80,000 |
|  |  |  | Asst professor | 20 | 59,216 | 8,708 | 50,800 | 59,500 | 63,500 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 4.10.2
SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME by RANK and GEOGRAPHIC REGION - 11 or 12 Month Contract 2006 ACS Salary Survey

|  |  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { GEOGRAPHIC } \\ & \text { REGION } \end{aligned}$ | Pacific | RANK | Full professor | 29 | 147,720 | 82,697 | 86,570 | 140,357 | 170,000 |
|  |  |  | Research appt | 32 | 79,044 | 33,118 | 59,092 | 66,624 | 92,205 |
|  | West | RANK | Full professor | 18 | 129,512 | 61,221 | 105,000 | 114,500 | 165,000 |
|  | East | RANK | Full professor | 19 | 124,413 | 45,903 | 97,800 | 130,000 | 150,000 |
|  | North |  | Research appt | 25 | 61,813 | 22,223 | 45,000 | 57,000 | 72,014 |
|  | East | RANK | Full professor | 16 | 125,940 | 89,661 | 80,000 | 96,000 | 131,000 |
|  | Middle | RANK | Full professor | 30 | 131,205 | 45,736 | 94,000 | 124,477 | 158,961 |
|  | Atlantic |  | Asst professor | 24 | 64,561 | 25,309 | 42,000 | 59,000 | 81,150 |
|  |  |  | Research appt | 20 | 66,649 | 19,809 | 46,000 | 62,200 | 83,531 |
|  | South | RANK | Full professor | 19 | 136,246 | 54,079 | 112,000 | 135,000 | 159,000 |
|  | Atlantic |  | Research appt | 16 | 54,197 | 23,178 | 40,000 | 48,688 | 62,000 |

Note: Categories with fewer than 15 cases have been suppressed.

Table 5.1.1
STIPENDS of ACADEMIC POSTDOCTORAL FELLOWS by INSTITUTIONAL CONTROL and WORK SPECIALTY 2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50 th $\%$-ile | 75th \%-ile |  |
| :--- | :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| WORK SPECIALTY | Chemistry | Total |  | 165 | 39,148 | 27,621 | 32,000 | 36,000 | 42,000 |
|  |  | INSTITUTIONAL | Public | 110 | 39,357 | 33,387 | 30,900 | 35,345 | 41,000 |
|  | CONTROL | Private | 55 | 38,731 | 8,167 | 35,858 | 38,000 | 42,000 |  |

Note: Categories with fewer than 15 cases have been suppressed.

Table 6.1.1
SALARIES of CHEMICAL ENGINEERS employed FULL-TIME in INDUSTRY by DEGREE and YEARS SINCE BS 2006 ACS Salary Survey

|  |  |  | Count | Mean | Std Dev | 25th \%-ile | 50th \%-ile | 75th \%-ile |
| :--- | :--- | :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| HIGHEST | BA or | Total |  |  |  |  |  |  |
| DEGREE | BS |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | MS | Total | 74 | 106,390 | 34,577 | 79,000 | 102,000 | 121,637 |
|  |  | $25-29$ | 16 | 115,069 | 42,219 | 77,000 | 103,000 | 138,000 |
|  | PHD | Total | 91 | 110,605 | 28,671 | 90,408 | 109,865 | 127,000 |
|  |  | $20-24$ | 15 | 109,689 | 43,218 | 90,840 | 105,000 | 129,643 |
|  |  | $25-29$ | 16 | 111,185 | 24,365 | 96,000 | 109,200 | 119,600 |

Note: Categories with fewer than 15 cases have been suppressed.

## SALARIES 2006

## Appendix A:

Survey Questionnaire

AMERICAN CHEMICAL SOCIETY 2006 Comprehensive Salary and Employment Status Survey

## MARKING INSTRUCTIONS

- Use a No. 2 pencil or blue or black ink pen only.

INCORRECT MARKS
$\checkmark \times M$
CORRECT MARK

## I. EDUCATION AND EMPLOYMENT STATUS

1. What is the highest degree you have received to date?

Fill in one.
Less than Bachelor's
Bachelor's
Master's
Doctorate
Other, please specify
2. Please indicate the year for each degree you have earned.


3. Please indicate the one field of the highest degree you have earned and the one specialty most related to your current or most recent job using the appropriate column below. Fill in one response for each column.

$$
\frac{\text { One field }}{\text { One work }}
$$

Chemical engineering
Agricultural/food chemistry
Analytical chemistry
Biochemistry
Biotechnology
Chemical education
Clinical chemistry
Environmental chemistry
General chemistry
Inorganic chemistry
Materials science
Medicinal/pharmaceutical chemistry
Organic chemistry
Physical chemistry
Polymer chemistry
Other chemical science
Business administration
Computer science
Law
Other non-chemistry
4. Please indicate your primary employment status as of March 1, 2006. Choose the one category that best fits your situation.

| Employed full-time ( 35 hours or more per week) | Go to 5 |
| :--- | :--- |
| Employed part-time | Go to 5 |
| Postdoctoral or other fellowship | Go to 5 |
| Not employed but actively seeking employment | Go to 7 |
| Not employed and not seeking employment | Go to 28 |
| Fully retired | Go to 28 |

5. If you are currently employed, how long have you worked for your current employer? Fill in one.
Less than 1 year

- 1 to 4 years
5 to 9 years
- 20 or more
10 to 19 years years

6. If you are currently employed, is your job permanent or temporary? Fill in one.
$\bigcirc$ P
Permanent - Go to 8
Agency temp - Go to 8
Temporary - Go to 8 Fix Fixed term contract - Go to 8
7. If you were not employed but actively seeking employment on March 1, 2006, how long had you been unemployed? Fill in one.
Less than 1 month

1 to 3 months \begin{tabular}{l}
4 to 6 months <br>
7 to 12 months

 

More than <br>
1 year
\end{tabular}

8. Regardless of your current status, was there any period when you were not employed but actively seeking employment in calendar year 2005? Fill in one.
Yes
$\bigcirc$ No - Go to 9

If yes, how many total months were you not employed but actively seeking employment in calendar year 2005? Fill in one.
$\bigcirc$
Less than 1 month
$\bigcirc$
4 to 6 months
12 months
9. What are the first three digits of the zip code of your current or most recent place of employment?


## II. CURRENT INCOME AND JOB EVALUATION

If you are employed, either full-time or part-time, please answer current income and job evaluation. If you are not currently employed, please go to Section III.
10. What was your base annual salary from your primary employer as of March 1, 2006? Do not include bonuses, earnings from second employer, overtime work, summer teaching, or other supplemental earnings. If on a 9 or 10 month contract, report the 9 or 10 month salary rather than an annualized salary. If none, enter zero.

| SALARY | Annual | \$ |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 0 | $\bigcirc$ |  | 0 | 0 | 0 |
|  |  |  |  | (1) | (1) | 1 |  | (1) | (1) | (1) |
|  |  |  |  | (2) | (2) | (2) |  | (2) | (2) | (2) |
|  |  |  |  | (3) | (3) | (3) |  | (3) | (3) | (3) |
| THIS | As of |  |  | (4) | (4) | (4) |  | (4) | (4) | (4) |
| MARCH | 3/1/06 |  |  | (5) | 5 | 5 |  | 5 | 5 | (5) |
|  |  |  |  | (6) | (6) | (6) |  | (6) | 6 | (6) |
|  |  |  |  | (7) | 7 | 7 |  | (7) | 7 | (7) |
|  |  |  |  | (8) | 8 | 8 |  | 8 | 8 | (8) |
|  |  |  |  | (9) | (9) | 9 |  | 9) | 9 | (9) |

11. What was your base annual salary from your primary employer as of March 1, 2005? Do not include bonuses, earnings from second employer, overtime work, summer teaching, or other supplemental earnings. If on a 9 or 10 month contract, report the 9 or 10 month salary rather than an annualized salary. If none, enter zero.

12. What was your total professional income during calendar year 2005? Include consulting fees, base annual salary, bonuses, earnings from second employer, overtime, summer teaching, and other supplemental earnings.

13. Were you eligible for bonus during calendar year 2005 ?
$\bigcirc$ Yes $\square$ No - Go to 14

If Yes, did you receive a bonus?
$\bigcirc$ Yes
$\bigcirc$ No - Go to 14
If Yes, please indicate amount \$

|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (0) | (0) | (0) | 0 | 0 | 0 |
| (1) | (1) | (1) | (1) | (1) | 1 |
| (2) | (2) | (2) | (2) | (2) | 2 |
| (3) | (3) | (3) | (3) | (3) | 3 |
| (4) | (4) | (4) | (4) | (4) | 4 |
| (5) | (5) | (5) | (5) | (5) | 5 |
| (6) | (6) | (6) | (6) | (6) | 6 |
| (7) | (7) | (7) | (7) | 7 | 7 |
| (8) | (8) | (8) | (8) | (8) | 8 |
| (9) | (9) | (9) | (9) | 9 | 9 |

Calendar
Year
2005
14. Did you receive stock as part of your annual professional income in 2005?

## $\bigcirc$ Yes

$\bigcirc$ No
15. Was consulting your primary occupation in 2005?

> Yes - Go to 16A
$\bigcirc$ No
16. Did you do any consulting in 2005? Fill in one.

$$
\text { Yes } \quad \text { No - Go to Section III }
$$

16A. If yes, how many hours did you consult per month? Fill in one.


16B. If you did any consulting, what was your approximate hourly rate?
\$


16C. What was your total consulting income during calendar year 2005?

| \$ |  |  |  |  |  |  |  | . 00 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | ,0 | 0 |  | , 0 | 0 | (0) |  |
|  | (1) | (1) | (1) | (1) | (1) | (1) | (1) |  |
| Calendar | (2) | (2) | (2) | (2) | (2) | (2) | (2) |  |
|  | (3) | (3) | (3) | (3) | (3) | (3) | (3) |  |
| Year | (4) | (4) | (4) | (4) | (4) | (4) | (4) |  |
| 2005 | (5) | (5) | (5) | (5) | (5) | (5) | (5) |  |
|  | (6) | (6) | (6) | (6) | (6) | (6) | (6) |  |
|  | (7) | (7) | (7) | (7) | (7) | (7) | (7) |  |
|  | (8) | (8) | (8) | (8) | (8) | (8) | (8) |  |
|  | (9) | (9) | (9) | (9) | (9) | (9) | (9) |  |

III. CURRENT OR MOST RECENT PRIMARY JOB

If your most recent employer is not or was not an academic institution, go to Section III. B. Question 23

## A. Academic employer.

17. Please indicate your current or most recent primary academic employer: Fill in one only for Q17.
College or university excluding medical schools where the highest degree offered in chemistry or chemical engineering is:
Associate's
Bachelor's
Master's
Doctorate
University medical or professional school
High school
Other academic, please specify
18. What is or was your academic employer? Fill in one.
$\bigcirc$ Public institution $\bigcirc$ Private institution
19. What is or was your academic rank? Fill in one.

Full professor
Associate professor
Assistant professor
Visiting or adjunct professor, instructor, lecturer
Non-teaching research appointment
Other non-faculty
My institution does not have ranks
Secondary Teacher
20. Have or had you been granted tenure? Fill in one.

Yes
Not tenured, in tenure track
Not tenured, not in tenure track
Not Applicable
21. What is or was your basic contract period? Fill in one. 9 or 10 months 11 or 12 months
22. About what fraction of your total working time in your contract period is or was devoted to: Fill in all that apply.

Teaching, undergraduate


Go to 28

## B. Non-academic employer.

23. Please indicate current or most recent principal employer: Fill in one only for Q23.

Manufacturing company primarily involved in:
Aerospace/auto/transportation
Agricultural chemicals
Basic commodity chemicals
Biochemical products
Building materials
Coatings/paints/inks
Electronics/computers/semiconductors
Food
Instruments
Medical devices/diagnostic products
Metals/minerals
Paper
Personal care
Petroleum/natural gas
Pharmaceutical products
Plastics
Rubber
Soaps/detergents/surfactants
Specialty/fine chemicals
Textiles
Other manufacturing, please specify

Or
Non-manufacturing company, not self-employed, primarily involved in:

Analytical service/testing laboratory
Biotech research firm
Independent or contract research firm
Hospital or clinical laboratory
Non-profit organization
Private utility company
Professional services - scientific/engineering/law
Research institution
Scientific temporary or personnel agency
Other non-manufacturing, please specify

|  | 0 |
| :---: | ---: |
|  | 0 |
|  | 0 |
|  | 0 |
|  | 0 |
| cering/law | 0 |
| cy | 0 |
| y | 0 |

Or
Government:

## Federal (civilian)

Military
State or local
Other government, please specify

Or

## Self-employed

24. Employer's approximate number of employees (total for the whole organization/parent company):
Fewer than 50
50 to 99
100 to 499
500 to 2,499
2,500 to 9,999
10,000 to 24,999
25,000 or more
25. Please indicate the one work function that best describes your job: Fill in one.
Analytical services, other than forensics
Chemistry information services
Computer programming, analysis, design
Consulting
Forensic analysis
General management or administration
(other than R\&D)
Health and safety/regulatory affairs
Marketing, sales, purchasing, technical service, economic evaluation
Patents, licensing, trademarks
Production, quality control
Research and Development:
Applied research, development, design
Basic research
Management or administration of R\&D
Training or teaching
Other, please specify
26. How is your job classified? Fill in one.

Manager or administrator
Scientist or engineer
Chemical or engineering technician
Other, please specify
27. How many people did you or do you supervise, directly or indirectly?


## IV. QUESTIONS ABOUT YOURSELF

28. What is your sex?
$\bigcirc$ Male $\bigcirc$ Female
29. What was your age on March 1, 2006?

Age
As of
3/1/2006
30. What is your citizenship or visa status? Fill in one.
U.S. native
U.S. naturalized
U.S. permanent resident visa

Other visa
31. Are you of Hispanic or Latino origin or descent?
$\bigcirc$ Yes
No
32. Fill in the one race with which you most identify.

American Indian or Alaskan Native
Asian or Pacific Islander
Black or African American
White
Other race, please specify

In a continued effort to observe the changes in the total compensation of ACS members, this section is a follow-up to the fringe benefits questions that appeared on the 1998 Salary Survey. Please take the time to answer the following questions.
33. Paid Leave. Please indicate which of the following types of paid leave are available to you.

Available
Type of Paid Leave
Holidays
Holidays
Vacation/leave
Sick leave
Leave for care of sick family members
Newborn leave
Funeral/bereavement leave
Jury duty leave
Other paid personal leave

| Yes | No |
| :---: | :---: |
| (1) | (2) |
| (1) | (2) |
| (1) | (2) |
| (1) | (2) |
| (1) | (2) |
| (1) | (2) |
| (1) | (2) |
| (1) | (2) |

(specify)
34. Unpaid Leave. Please indicate whether unpaid leave
is available to you.

$$
\frac{\text { Available }}{\text { Yes No }}
$$

35. Retirement and Savings Programs. Please indicate which of the following types of retirement and savings programs are available to you.

| Available |  |
| :---: | :---: |
| Yes |  |
| (1) | (2) |
| (1) | (2) |
| (1) | (2) |
| (1) | (2) |
| (1) | (2) |
| (1) | (2) |
| (1) | (2) |
| (1) | (2) |

Savings plans e.g., 401(k) or 403(b)
Employee stock ownership
Employer matching savings program
Profit sharing plan
Stock options
Flexible spending accounts
Employer-defined benefit pension
Other retirement or savings
(specify)
36. Are your benefits provided under a flexible benefits program? This is where you determine how your benefits package is apportioned.

$$
\text { (1) Yes (2) No - Go to } 37
$$

If yes, simply answer the remaining questions "Yes" or "No", i.e. do not indicate portion of premium "paid by employer".
37. Medical/Dental Plans. Please indicate which of the following types of medical and dental benefits are available to you. If available and not a flexible benefit, what approximate portion of the premium is paid
by your employer?

|  | Available |  | by Your Employer |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Plan or Benefit | Yes | No |  | Partial | Non |
| Medical coverage for employee |  | (2) |  |  |  |
| Medical coverage for family | (1) | (2) | (1) | (2) | (3) |
| Dental coverage for employee | (1) | (2) | (1) | (2) |  |
| Dental coverage for family | (1) | (2) | (1) | (2) | (3) |
| Vision coverage for employee | (1) | (2) | (1) | (2) | (3) |
| Vision coverage for family | (1) | (2) | (1) | (2) |  |
| Prescription drug program | (1) | (2) | (1) | (2) |  |
| Annual physical | (1) | (2) | ) | 2 |  |
| Wellness/fitness program | (1) | (2) | (1) | (2) |  |
| Other Medical coverage | (1) | (2) | - |  |  | Other Medical coverage (specify)

38. Insurance. Please indicate which of the following types of insurance are available to you. If available and not a flexible benefit, what approximate portion of the premium is paid by your employer?

| Type of Insurance | Available |  | Portion of Premium Pai by Your Employer |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Yes | No |  | Partial | None |
| Life insurance for employee |  | (2) |  | (2) |  |
| Life insurance for family | (1) | (2) | (1) | (2) |  |
| Accidental death/ dismemberment | (1) | (2) | (1) | (2) | (3) |
| Long term care insurance | (1) | (2) | (1) | (2) | (3) |
| Short term disability | (1) | (2) | (1) | (2) | (3) |
| ong term disability | (1) | 2) | D | (2) | (3) |
| Other insurance (travel, etc. | (1) | (2) | (1) |  |  |

39. Professional Development. Please indicate which of the following types of professional development benefits are available to you. If available and not a flexible benefit, what approximate portion of the cost is paid by your employer?

Portion of Cost Paid

| Professional Development | Available |  | by Your Employer |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Yes | No | All | Partial |  |
| College tuition reimbursement | (1) | (2) |  | (2) |  |
| Cultural diversity training | (1) | (2) | (1) | (2) | (3) |
| Educational leave | (1) | (2) | (1) | (2) |  |
| In-house training courses | (1) | (2) | (1) | (2) | (3) |
| Outside training/workshops/ short courses | (1) | (2) | (1) | (2) |  |
| Professional assn. dues | (1) | (2) | (1) | (2) | (3) |
| Sabbatical leave | (1) | (2) | 1 | (2) |  |
| Travel to technical meetings | (1) | (2) | (1) | (2) | (3) |
| Other prof development (specify) | (1) | (2) | (1) | (2) | (3) |

40. Other Programs. Please indicate which of the following types of programs are available to you. If available and not a flexible benefit, what portion of the cost is paid by your employer?

|  | Available |  | Portion of Cost Paid by Your Employer |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Other Programs |  |  |  |  | None |
| Benefit sharing with other | (1) | (2) | (1) | (2) |  |
| Employee assistance program | (1) | (2) | (1) | (2) | (3) |
| Ergonomic equipment | (1) | (2) | (1) | (2) |  |
| Flexible work hours | (1) | (2) | (1) | (2) | (3) |
| Job Sharing | (1) | (2) | (1) | (2) |  |
| Off-site child care | (1) | (2) | (1) | (2) | (3) |
| On-site child care | (1) | (2) | (1) | (2) | (3) |
| Personal Protective Equipment | (1) | (2) | (1) | (2) | (3) |
| Other <br> (specify) | (1) | (2) | (1) | (2) | ( |

Please provide comments on other fringe benefits.

Please provide any additional comments.
$\boxtimes \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times \times$

## Appendix B:

Reprint of Employment \& Salary Survey by Michael Heylin, C\&EN

# EMPLOYMENT \& SALARY SURVEY 

# Uptick in the job market for chemists in 2006 and a routine salary boost for those with jobs 

MICHAEL HEYLIN, C\&EN WASHINGTON

THE LATEST VERSION OF THE AMERican Chemical Society's annual survey of the employment status and salaries of its members in the domestic workforce indicates an improvement in the job market as well as a higher-than-inflation gain in the salaries of individual chemists. The survey also takes the first look since 1998 at the fringe benefits received by working chemists.

The improvement in employment is small statistically. But, however slight, it is welcome after four weak years following the last good year for the employment of chemists in 2001. The 2005-06 increase in the median full-time salaries of those in their jobs for at least a year was $4.7 \%$. This is exactly the same as the average year-toyear gain for the previous 10 years.

The percentage of survey respondents with full-time jobs moved up from $90.8 \%$ in 2005 to $91.3 \%$ in 2006. But it was still well shy of the recent high of $94.6 \%$ in 2001. The $3.0 \%$ of 2006 respondents who were unemployed but seeking employment was down only nominally from the $3.1 \%$ in 2005. But it remained below the all-time high jobless rates of $3.5 \%$ in 2003 and $3.6 \%$ in 2004. In 2006, $3.4 \%$ of respondents had part-time jobs and $2.3 \%$ were on postdocs or fellowships.

These incremental job gains for chemists came as overall employment in the U.S. was continuing to show considerable, if belated, improvement after a protracted difficult period.

The median full-time base salaries of chemists-those who responded to the 2006 survey, had not changed jobs since the previous survey, and reported their salaries as of March 1 of both 2005 and 2006rose from $\$ 83,000$ in 2005 to $\$ 86,900$ in 2006 for the $4.7 \%$ increase. The consumer price
index for urban consumers rose by $3.4 \%$ over the period.

For those with a bachelor's as their highest degree, the change was from $\$ 64,000$ in 2005 to $\$ 67,200$, for a $5.0 \%$ increase. The gain for those with a master's was from $\$ 75,000$ to $\$ 79,000$, or $5.3 \%$, and for Ph.D.s, from $\$ 92,000$ to $\$ 96,000$, or $4.4 \%$.

For all chemists as a group, the median full-time salary of all respondents to the 2006 survey was $\$ 85,000$. This was up by $2.4 \%$ from the $\$ 83,000$ median for all respondents to the 2005 survey. This way of determining salary growth as the difference in the medians from separate surveys done one year apart yields lower rates of gain because it does not account for raises due to the growing experience and promotions of individual chemists.

## EMPLOYMENT STATUS

Job market improved slightly for chemists in 2006

|  | EMPLOYED |  |  | $\begin{array}{c}\text { UNEMPLOYED, } \\ \text { SEEKING } \\ \\$ |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  FULL-TIME \end{array} |  |  |  |  |
| 1996 | $91.5 \%$ | PART-TIME |  | POSTDOC | $\left.\begin{array}{c}\text { EMPLOYMENT }\end{array}\right]$

NOTE: As of March 1 each year. Based on population that excluded those fully retired or otherwise unemployed and not seeking employment. SOURCE: ACS salary survey 2006


Responses to the questions on benefits indicate that they are about as available to chemists in 2006 as they were in 1998. However, employers are tending to pay less of the associated costs, whereas chemists are needing to pay a little more.

The 2006 survey involved mailing questionnaires to a random sample of 24,000 ACS members who were most likely to be in the domestic workforce. They all resided in the U.S., were under 70 years of age, and were not in the emeritus, retired, or student member categories.

TOTAL RESPONSE was 8,580 , for a $36 \%$ response rate. Almost 400 respondents, or about $4 \%$, were either fully retired or otherwise unemployed and not seeking employment. This means that $96 \%$ of respondents were in the domestic workforce.

The 2005 survey was a census conducted once every five years. Questionnaires were sent to all 86,600 members believed to be in the domestic workforce at that time. Total response was a little more than 35,000 , or $40 \%$.

Of the 2006 respondents, almost 8,000 were chemists, about 300 were chemical engineers, and about 400 identified themselves as "other." With the exception of the box on chemical engineers, all of the data in this report are for chemist respondents only.

For survey purposes, ACS defines chemists as those who identify any one of 15 chemical disciplines or specialties listed in the questionnaire as being the most closely related to their current or latest employment. Also included as chemists are those with chemistry as their highest degree and who indicate business administration, computer science, law, or "other nonchemistry activities" as their specialty.

Chemical engineers are those who identify chemical engineering as being closest to their employment, including those whose highest degree is in chemistry.

Workforce chemists are defined as those who have full- or part-time jobs, are on postdocs or fellowships, or are unemployed but actively seeking employment. Respondents who are fully retired or otherwise unemployed and not seeking employment are not included in the analyses.

This year's survey was conducted by Senior Research As-
sociate Janel Kasper-Wolfe of ACS's Department of Member Research \& Technology under the general guidance of the ACSCommittee on Economic \& Professional Affairs.

A full report of the 2006 member survey will be available this fall for $\$ 250$ from the American Chemical Society, Office of Society Services, 1155-16th St., N.W., Washington, DC 20036; (202) 872-4600.

Questions concerning the content of the 2006 survey should be directed to Kasper-Wolfe at (202) 872-6120.

THE WORKING chemical community continues slowly to become more diverse. In 2006, 25.8\% of respondents were women. This was up from $25.1 \%$ in 2005 and $15.0 \%$ in 1985 . Of those with a bachelor's as their highest degree in $2006,34.8 \%$ were women, as were $34.1 \%$ of the master's and $20.7 \%$ of the Ph.D.s.

Women have been earning just at or just above $50 \%$ of new chemistry bachelor's degree graduates since 2002 , according to data gathered for the ACS Com-

## SALARY TRENDS

Current-dollar salaries of chemists as a group over the past decade have increased faster than inflation

| \$ THOUSANDS | BACHELOR'S | MASTER'S | PH.D | CHLL <br> CHEMISTS |
| :--- | :---: | :---: | :---: | :---: |
| 1996 | $\$ 45.0$ | $\$ 53.6$ | $\$ 68.0$ | $\$ 60.0$ |
| 1997 | 49.4 | 56.2 | 71.0 | 63.0 |
| 1998 | 49.6 | 57.7 | 73.3 | 65.0 |
| 1999 | 50.1 | 61.0 | 76.0 | 68.0 |
| 2000 | 53.1 | 62.0 | 79.0 | 70.0 |
|  |  |  |  |  |
| 2001 | 55.0 | 65.0 | 82.2 | 73.0 |
| 2002 | 58.0 | 68.5 | 85.2 | 76.5 |
| 2003 | 59.7 | 71.3 | 90.0 | 80.0 |
| 2004 | 62.0 | 72.3 | 91.6 | 82.0 |
| 2005 | 63.0 | 74.0 | 93.0 | 83.0 |
| 2006 | 65.2 | 77.5 | 95.0 | 85.0 |

AVERAGE ANNUAL SALARY INCREASE

| A $2005-06$ | $3.5 \%$ | $4.7 \%$ | $2.2 \%$ | $2.4 \%$ |
| :--- | :--- | :--- | :--- | :--- |
| $1996-06$ | 3.7 | 3.8 | 3.4 | 3.5 |

CONSUMER PRICE INDEX, AVERAGE ANNUAL INCREASE

| $2005-06$ | $3.4 \%$ |
| :--- | :--- |
| $1996-06$ | 2.5 |

NOTE: Median base salaries in thousands of dollars for those with full-time permanent jobs as of March 1 each year. SOURCES: ACS's annual salary and employment surveys; Bureau of Labor Statistics for consumer price index

By race, the number of respondents to ACS's salary surveys who are white continues to drift downfrom $91.0 \%$ in 1990 to $85.8 \%$ in 2005 and $84.3 \%$ in 2006 . Asians have posted the biggest gains, moving from $6.3 \%$ to $10.9 \%$ to $11.7 \%$ over the same years. Penetration into chemistry by blacks and Hispanics, both of whom constitute about $13 \%$ of the U.S. population, remains limited. In 1990, $1.3 \%$ of respondents were black and $1.4 \%$ were Hispanic. In 2006, these levels had increased to only $1.9 \%$ and $2.8 \%$, respectively.

ACS members in the workforce are steadily becoming better qualified. In 1985, $25.4 \%$ of the respondents had a bachelor's as their highest degree. By 2006, this was down to $19.6 \%$. The reverse trend holds for Ph.D.-degree holders, up from $56.7 \%$ of all respondents in 1985 to $62.7 \%$ in 2006. Master's graduates have remained largely level, at $17.9 \%$ in 1985 and $17.7 \%$ in 2006.

## SALARIES BY REGION

## Chemists on the East and West Coasts may have an advantage


en from 42 years in the 1990 and 1995 surveys to 47 years in 2006. Men, with a median age of 48 , are six years older than women. This difference is even larger for industrial chemists, with men's median at 48 in 2006 and women's at 39. Ph.D.s, at 48 years, are four years older than bachelor's.

This upward trend may be topping out. The mean age of all chemists in 2006 of 46.6 years was slightly down from 47.0 a year earlier.

The demographics of bachelor's and $\mathrm{Ph} . \mathrm{D}$. chemists vary quite sharply, and those of master's generally fall somewhere between the two. The 2006 survey indicates that $10 \%$ of bachelor's chemists are nonwhite. This compares with $18 \%$ of Ph.D.s and $13 \%$ of master's. More than $93 \%$ of bachelor's are native born, and just under $5 \%$ are naturalized citizens, whereas only $73 \%$ of Ph .D.s are native born and $13 \%$ are naturalized.

Another big difference by degree is in type of employment, with $81 \%$ of bachelor's working in business or industry compared with $53 \%$ of Ph. D.s. In contrast, $39 \%$ of Ph.D.s are working in academia, compared with $8 \%$ of bachelor's.

The percent of chemists who are women varies from $18 \%$ of those whose highest degree is in organic chemistry to $43 \%$ of those with

## ACS MEMBERS IN DOMESTIC WORKFORCE <br> Working chemists as a group have become older, better qualified, and somewhat more diverse

|  | $\mathbf{1 9 8 5}$ | $\mathbf{1 9 9 0}$ | $\mathbf{1 9 9 5}$ | $\mathbf{2 0 0 0}$ | $\mathbf{2 0 0 5}$ | $\mathbf{2 0 0 6}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| BY DEGREE |  |  |  |  |  |  |
| Bachelor's | $25.4 \%$ | $24.3 \%$ | $24.3 \%$ | $22.1 \%$ | $19.9 \%$ | $19.6 \%$ |
| Master's | 17.9 | 17.2 | 16.9 | 17.4 | 17.0 | 17.7 |
| Ph.D. | 56.7 | 58.5 | 58.8 | 60.5 | 63.1 | 62.7 |


| BY GENDER |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Men | 85.0 | 81.7 | 78.5 | 75.8 | 74.9 | 74.2 |
| Women | 15.0 | 18.3 | 21.5 | 24.2 | 25.1 | 25.8 |
|  |  |  |  |  |  |  |
| BY AGE | 42.8 | 41.8 | 40.7 | 34.1 | 27.8 | 33.0 |
| Up to 39 | 37.1 | 37.9 | 42.2 | 42.9 | 44.7 | 47.6 |
| 40 to 54 | 19.9 | 20.4 | 17.2 | 22.9 | 27.5 | 19.4 |
| 55 and older | 43.6 | 41.3 | 43.3 | 44.7 | 47.0 | 46.6 |
| Mean age |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| BY EMPLOYER | 66.4 | 63.8 | 65.5 | 64.7 | 62.0 | 61.6 |
| Business/industry | 9.7 | 8.9 | 7.9 | 6.9 | 7.4 | 7.8 |
| Government | 23.0 | 24.2 | 25.1 | 26.4 | 28.8 | 28.9 |
| Academia | 0.9 | 3.1 | 1.4 | 2.0 | 1.8 | 1.7 |
| Self-employed |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| BY CITIZENSHIP | 87.6 | 87.7 | 82.3 | 79.5 | 79.8 | 79.3 |
| Native born | 8.0 | 7.1 | 8.5 | 10.2 | 10.2 | 10.7 |
| Naturalized | 8.7 | 3.9 | 7.1 | 6.9 | 6.5 | 6.5 |
| Permanent resident | 3.7 | 1.3 | 2.1 | 3.4 | 3.5 | 3.5 |
| Other visa | 0.7 |  |  |  |  |  |
|  |  |  |  |  |  |  |
| BY RACE |  | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 |
| American Indian | na | 0.4 | na | 6.3 | 10.3 | 11.1 |
| Asian | na | 1.3 | 1.4 | 10.9 | 11.7 |  |
| Black | na | 91.0 | 85.8 | 85.5 | 1.9 | 1.9 |
| White | na | 1.0 | 2.3 | 1.3 | 1.2 | 1.9 |
| Other |  |  |  |  |  | 1.9 |


| BY ETHNICITY |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Hispanic | na | 1.4 | 2.3 | 2.5 | 2.6 | 2.8 |

[^1]
## DEMOGRAPHICS BY DEGREE

Profiles of working ACS members vary markedly by highest degree earned

|  | BACHELOR'S | MASTER'S | Ph.D. | ALL |
| :---: | :---: | :---: | :---: | :---: |
| BY GENDER |  |  |  |  |
| Men | 65.2\% | 65.9\% | 79.3\% | 74.2\% |
| Women | 34.8 | 34.1 | 20.7 | 25.8 |
| BY RACE |  |  |  |  |
| American Indian | 0.4 | 0.2 | 0.2 | 0.2 |
| Asian | 5.1 | 9.1 | 14.5 | 11.7 |
| Black | 2.8 | 2.4 | 1.4 | 1.9 |
| White | 89.9 | 86.8 | 81.9 | 84.3 |
| BY ETHNICITY |  |  |  |  |
| Hispanic | 3.6 | 2.8 | 2.6 | 2.8 |
| BY CITIZENSHIP |  |  |  |  |
| Native born | 93.4 | 85.6 | 73.1 | 79.3 |
| Naturalized | 4.7 | 10.0 | 12.8 | 10.7 |
| Permanent resident | 1.4 | 3.0 | 9.1 | 6.5 |
| Other visa | 0.5 | 1.5 | 5.0 | 3.5 |
| BY EMPLOYER |  |  |  |  |
| Business/Industry | 80.8 | 71.3 | 52.9 | 61.6 |
| Government | 9.7 | 8.6 | 7.0 | 7.8 |
| Academia | 7.8 | 18.1 | 38.6 | 28.9 |
| Self-employed | 1.6 | 2.0 | 1.6 | 1.7 |

HOW TO READ THIS TABLE: Using the example of men: 65.2\% of bachelor's degree respondents are male, as are $65.9 \%$ of master's, $79.3 \%$ of Ph.D.s, and $74.2 \%$ of all respondents. NOTE: Data are for ACS members in the domestic workforce as of March 1, 2006. SOURCE: ACS salary survey 2006

## WHERE THE JOBS ARE

Younger chemists are more likely to work in academia or pharmaceuticals

| \% OF CHEMISTS | AGE |  | ALL |
| :---: | :---: | :---: | :---: |
|  | UNDER 40 | 40+ |  |
| MANUFACTURING | 52\% | 50\% | 51\% |
| Chemical \& related | 13 | 16 | 15 |
| Pharmaceutical/health/bio | 29 | 20 | 23 |
| Other manufacturing | 10 | 14 | 13 |
| ACADEMIA | 32 | 28 | 29 |
| University/four-year college | 23 | 19 | 20 |
| Two-year college | 2 | 3 | 3 |
| Medical school | 3 | 3 | 3 |
| High school | 2 | 2 | 2 |
| Other | 2 | 1 | 1 |
| NONMANUFACTURING/ NONACADEMIC | 16 | 20 | 18 |
| Analytical/research services | 8 | 7 | 7 |
| Government | 5 | 9 | 8 |
| Other | 3 | 4 | 3 |
| SELF-EMPLOYED | 1 | 2 | 2 |

NOTE: Percentage of chemists at all degree levels with full-time jobs as of March 1, 2006. SOURCE: ACS salary survey 2006
their highest degree in biotechnology and $46 \%$ of clinical chemists. By work specialty, it ranges from $18 \%$ of those working in organic chemistry, polymer chemistry, and materials science to $43 \%$ of those in chemical education.

THE MODEST IMPROVEMENT in the employment situation for chemists between March 2005 and March 2006 came at a time when nonfarm payrolls, as measured by the Bureau of Labor Statistics (BLS), increased by a reasonably healthy 2.0 million. This followed a similar 2.1 million gain in the previous 12 months.

These recent gains are in the ballpark of the average 2.4 million yearly payroll increases during the 1992-2001 economic boom. And they follow a 2.6 million decline between 2001 and 2004. Payrolls remained below their February 2001 high for an unprecedented four years.

## AGE OF CHEMISTS

Median age for men is six years more than for women, and that for Ph.D.s is four years more than for bachelor's

|  | MEDIAN <br> AGE | MEAN <br> AGE |
| :--- | :---: | :---: |
| ALL CHEMISTS | 47 | 46.6 |
|  |  |  |
| BY DEGREE | 44 | 42.7 |
| Bachelor's | 48 | 46.7 |
| Master's |  | 47.9 |
| Ph.D. | 48 | 47.9 |
|  | 42 | 42.9 |
| BY GENDER |  |  |
| Men | 46 | 45.5 |
| Women | 43 | 44.4 |
|  | 45 | 44.8 |
| BY RACE | 48 | 47.0 |
| American Indian |  |  |
| Asian | 44 | 43.5 |
| Black |  |  |
| White |  |  |
| BY ETHNICITY | 48 | 46.8 |
| Hispanic | 50 | 50.2 |
| BY CITIZENSHIP | 40 | 42.0 |
| Native born | 35 | 36.0 |
| Naturalized | 46.5 |  |
| Permanent resident | 46.9 |  |
| Other visa |  |  |
| BY EMPLOYER |  |  |
| Industry/business |  |  |
| Government |  |  |
| Academia |  |  |

NOTE: As of March 1, 2006.
SOURCE: ACS salary survey 2006

## WORK SPECIALTY/HIGHEST DEGREE

Many with inorganic, organic, and physical chemistry degrees work in other chemistry fields

|  | PERCENT OF TOTAL |  | PERCENT WHO ARE WOMEN ${ }^{\text {a }}$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  | SPECIALTY | HIGHEST DEGREE | WORK SPECIALTY | HIGHEST DEGREE |
| CLASSIC CHEMISTRY | 43.1\% | 62.2\% | 23\% | 22\% |
| Analytical | 17.3 | 12.3 | 30 | 28 |
| Inorganic | 3.2 | 9.4 | 20 | 25 |
| Organic | 10.3 | 26.3 | 18 | 18 |
| Physical | 4.5 | 10.7 | 21 | 21 |
| Polymer | 7.8 | 3.5 | 18 | 22 |
| GENERAL CHEMISTRY | 2.7 | 12.1 | 33 | 38 |
|  |  |  |  |  |
| OTHER CHEMISTRY | 45.6 | 17.8 | 28 | 30 |
| Agricultural/food | 2.8 | 0.8 | 25 | 29 |
| Biochemistry | 5.2 | 8.0 | 32 | 31 |
| Biotechnology | 3.7 | 0.4 | 25 | 43 |
| Chemical education | 7.1 | 1.3 | 43 | 40 |
| Clinical chemistry | 0.8 | 0.2 | 29 | 46 |
| Environmental chemistry | 5.7 | 2.1 | 29 | 28 |
| Materials science | 5.4 | 1.0 | 18 | 29 |
| Medicinal/pharmaceutical | 12.1 | 2.6 | 24 | 21 |
| Other chemical | 2.8 | 1.4 | 23 | 34 |
|  |  |  |  |  |
| CHEMICAL ENGINEERING | id | 3.1 | id | 18 |
|  |  |  |  |  |
| NONCHEMISTRY | 8.6 | 4.8 | 27 | 35 |
| Business administration | 1.5 | 1.0 | 18 | 29 |
| Computer science | 0.9 | 0.1 | 16 | id |
| Law | 1.2 | 0.2 | 27 | id |
| Other nonchemistry | 5.0 | 3.5 | 31 | 37 |

HOW TO READ THIS TABLE: Using the example of analytical chemistry: $17.3 \%$ of respondents, $30 \%$ of whom are women, work in analytical chemistry. $12.3 \%$ of respondents, $28 \%$ of whom are women, have their highest degree in analytical chemistry. a Given as integers because some of the sample sizes are small. id = insufficient data to be meaningful. SOURCE: ACS salary survey 2006

MEDIAN BASE SALARIES
Ph.D. brings a substantial salary advantage in all fields


NOTE: Median annual base salary in thousands of dollars for those with full-time permanent jobs as of March 1, 2006. SOURCE: ACS salary survey 2006

## EMPLOYMENT

## TYPE OF EMPLOYMENT

Pharmaceutical/health/bio claim largest share of ACS member chemists working in manufacturing

|  | AGE |  |  |
| :--- | ---: | ---: | ---: |
| $\%$ OF CHEMISTS | UNDER 40 | 4.0+ | ALL |
| MANUFACTURING | $52.2 \%$ | $50.2 \%$ | $50.6 \%$ |
|  |  |  |  |
| CHEMICAL \& RELATED | 13.5 | 16.1 | 15.1 |
| Agricultural chemicals | 0.8 | 1.5 | 1.3 |
| Basic chemicals | 1.2 | 1.6 | 1.4 |
| Coatings/ink/paint | 2.9 | 3.4 | 3.2 |
| Personal care products | 0.8 | 1.0 | 0.9 |
| Plastics | 1.6 | 2.1 | 1.9 |
| Rubber | 0.4 | 0.6 | 0.5 |
| Soaps | 1.1 | 0.8 | 0.9 |
| Specialty chemicals | 4.7 | 5.1 | 5.0 |
|  |  |  |  |
| PHARMACUTICAL/HEALTH/BIO | 28.6 | 20.4 | 23.0 |
| Biochemical products | 1.0 | 0.9 | 0.9 |
| Biotech research | 3.9 | 1.6 | 2.4 |
| Medical devices | 2.3 | 2.2 | 2.3 |
| Pharmaceuticals | 21.4 | 15.7 | 17.4 |
|  |  |  |  |
| OTHER MANUFACTURING | 10.1 | 13.7 | 12.5 |
| Aerospace | 0.5 | 1.4 | 1.1 |
| Building materials | 0.6 | 0.8 | 0.7 |
| Electronics/semiconductors | 1.4 | 1.8 | 1.7 |
| Food | 1.2 | 1.5 | 1.4 |
| Instruments | 1.7 | 1.6 | 1.7 |
| Metals | 0.3 | 0.9 | 0.7 |
| Paper | 0.2 | 0.4 | 0.3 |
| Petroleum | 0.8 | 0.9 | 0.8 |
| Textiles | 0.4 | 0.3 | 0.3 |
| Other manufacturing | 3.0 | 4.1 | 3.8 |
|  |  |  |  |
| ACADEMIA | 31.8 | 28.0 | 29.2 |
| Associate's-granting | 2.2 | 2.8 | 2.6 |
| Bachelor's-granting | 7.3 | 6.6 | 6.8 |
| Master's-granting | 1.9 | 1.8 | 1.9 |
| Ph.D. | 13.9 | 10.6 | 11.6 |
| Medical school | 3.3 | 3.0 | 3.1 |
| High school | 1.5 | 2.2 | 2.0 |
| Other academic | 1.7 | 1.0 | 1.2 |
|  |  |  |  |


| NONMANUFACTURING/ |  |  |  |
| :--- | ---: | ---: | ---: |
| NONACADEMIA | 15.5 | 19.9 | 18.4 |
| Research related | 7.7 | 7.4 | 7.4 |
| Analytical service labs | 2.5 | 2.1 | 2.2 |
| Contract research | 1.3 | 1.6 | 1.5 |
| Professional services | 2.0 | 2.5 | 2.3 |
| Research institution | 1.7 | 1.1 | 1.3 |
| Scientific agency | 0.2 | 0.1 | 0.1 |
|  |  |  |  |
| GOVERNMENT | 5.2 | 8.7 | 7.6 |
| Federal civilian | 2.6 | 5.4 | 4.5 |
| Military | 0.4 | 0.3 | 0.3 |
| State/local | 1.8 | 2.5 | 2.3 |
| Other government | 0.4 | 0.5 | 0.5 |
| OTHER | 2.6 | 3.8 | 3.4 |
| Hospitals | 0.1 | 0.4 | 0.3 |
| Nonprofit | 1.3 | 1.8 | 1.6 |
| Private utility | 0.1 | 0.3 | 0.2 |
| Other nonmanufacturing | 1.1 | 1.3 | 1.3 |
|  |  |  |  |
| SELF-EMPLOYED | 0.5 | 2.3 | 1.7 |

NOTE: Percentage of chemists at all degree levels with full-time jobs as of March 1 2006. SOURCE: ACS salary survey 2006

The estimate of payrolls is generally considered to be the most reliable and meaningful of several monthly BLS estimates of employment.

There is evolutionary change going on in what chemists do. Returns of the 2006 survey indicate that a total of $62 \%$ of chemists have their highest degree in the classic subdisciplines of analytical, inorganic, organic, physical, or polymer chemistry. Only 43\%, however, indicate they work in these specialties. This is down from $52 \%$ in the 1990 survey.

In both 2006 and 1990, about $12 \%$ of working chemists had their degrees in general chemistry. But only $3 \%$ in 2006 and $6 \%$ in 1990 identified general chemistry as their work specialty.

The counterbalance comes in the "other" chemistry specialties. In 2006, $18 \%$ of chemists had their highest degrees in these chemistries, including $8 \%$ in biochemistry. However, $46 \%$ of responding chemists worked in these "other" specialties, including $12 \%$ in medicinal-pharmaceutical chemistry, $6 \%$ in environmental chemistry, and $5 \%$ each in

## SALARIES OF CHEMISTS WHO HAVE NOT CHANGED JOBS

Compared with 2005, chemists post a $4.7 \%$ increase in basic salaries

| MEDIAN SALARIES, \$ THOUSANDS | 2005 | 2006 | 2005-06 INCREASE | \% INCREASE |
| :---: | :---: | :---: | :---: | :---: |
| ALL | \$83.0 | \$86.9 | \$3.9 | 4.7\% |
| BY DEGREE |  |  |  |  |
| Bachelor's | 64.0 | 67.2 | 3.2 | 5.0 |
| Master's | 75.0 | 79.0 | 4.0 | 5.3 |
| Ph.D. | 92.0 | 96.0 | 4.0 | 4.4 |
| BY GENDER |  |  |  |  |
| Men | 88.0 | 92.0 | 4.0 | 4.6 |
| Women | 68.6 | 72.0 | 3.4 | 5.0 |
| BY RACE |  |  |  |  |
| American Indian | 65.0 | 69.0 | 4.0 | 6.2 |
| Asian | 84.0 | 88.0 | 4.0 | 4.8 |
| Black | 70.5 | 75.3 | 4.8 | 6.8 |
| White | 83.0 | 87.0 | 4.0 | 4.8 |
| BY ETHNICITY |  |  |  |  |
| Hispanic | 72.0 | 75.1 | 3.1 | 4.3 |
| BY CITIZENSHIP |  |  |  |  |
| Native born | 82.4 | 86.0 | 3.6 | 4.4 |
| Naturalized | 90.4 | 94.6 | 4.2 | 4.7 |
| Permanent resident | 81.0 | 87.0 | 6.0 | 7.4 |
| Other visa | 66.3 | 71.5 | 5.2 | 7.8 |
| BY EMPLOYER |  |  |  |  |
| Industry/business | 90.0 | 94.0 | 4.0 | 4.4 |
| Government | 85.0 | 90.0 | 5.0 | 5.9 |
| Academia | 65.0 | 68.3 | 3.3 | 5.1 |
| BY AGE |  |  |  |  |
| 20-29 | 47.0 | 50.8 | 3.8 | 8.1 |
| 30-39 | 68.5 | 73.0 | 4.5 | 6.6 |
| 40-49 | 86.0 | 90.0 | 4.0 | 4.7 |
| 50-59 | 94.1 | 97.8 | 3.7 | 3.9 |
| 60-69 | 95.5 | 98.6 | 3.1 | 3.3 |

NOTE: Salaries are as of March 1. SOURCE: ACS salary surveys 2005 and 2006

## EMPLOYMENT FACTORS

Chemists in manufacturing and management are more likely to be employed full-time

|  | EMPLOYED |  | POSTDOC | UNEMPLOYED, SEEKING EMPLOYMENT |
| :---: | :---: | :---: | :---: | :---: |
|  | FULLTIME | PART- <br> TIME |  |  |
| ALL CHEMISTS | 91.3\% | 3.4\% | 2.3\% | 3.0\% |
| BY DEGREE |  |  |  |  |
| Bachelor's | 93.4 | 3.2 | 0.2 | 3.2 |
| Master's | 92.4 | 4.6 | 0.0 | 2.9 |
| Ph.D. | 90.3 | 3.2 | 3.6 | 2.9 |
| BY GENDER |  |  |  |  |
| Men | 91.8 | 2.7 | 2.4 | 3.1 |
| Women | 89.8 | 5.7 | 1.9 | 2.6 |
| BY RACE |  |  |  |  |
| Asian | 88.1 | 1.8 | 7.3 | 2.9 |
| Black | 89.6 | 3.7 | 3.0 | 3.7 |
| White | 91.8 | 3.7 | 1.5 | 3.0 |
| BY ETHNICITY |  |  |  |  |
| Hispanic | 93.5 | 2.5 | 3.0 | 1.0 |
| BY CITIZENSHIP |  |  |  |  |
| Native born | 92.4 | 3.8 | 1.0 | 2.8 |
| Naturalized | 93.4 | 2.6 | 0.6 | 3.4 |
| Permanent resident | 90.0 | 1.5 | 4.2 | 4.2 |
| Other visa | 62.1 | 1.2 | 32.8 | 4.0 |


| BY CURRENT OR MOST RECENT EMPLOYER <br> Industry/manufacturing |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| 95.7 | 1.3 | 0.1 | 2.9 |  |
| Industry/nonmanufacturing | 88.8 | 5.2 | 0.7 | 5.4 |
| Government | 94.1 | 1.8 | 2.3 | 1.8 |
| High school | 96.2 | 3.1 | 0.0 | 0.6 |
| College/university | 85.5 | 5.1 | 7.4 | 1.9 |
| BY JOB FUNCTION |  |  |  |  |
| R\&D | 89.6 | 1.6 | 5.6 | 3.2 |
| R\&D management | 95.5 | 0.5 | 0.0 | 4.0 |
| Teaching | 90.7 | 8.0 | 0.6 | 0.7 |
| General management | 96.6 | 1.2 | 0.0 | 2.2 |
| Marketing | 92.9 | 4.0 | 0.0 | 3.1 |
| Production | 93.9 | 2.6 | 0.5 | 3.0 |


| BY AGE |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Under 25 | 86.5 | 5.4 | 2.7 | 5.4 |
| $25-29$ | 84.8 | 2.3 | 10.9 | 2.0 |
| $30-34$ | 87.4 | 1.8 | 8.6 | 2.2 |
| $35-39$ | 92.0 | 2.2 | 4.1 | 1.7 |
| $40-44$ | 93.0 | 2.7 | 1.2 | 3.2 |
| $45-49$ | 94.6 | 1.9 | 0.4 | 3.1 |
| $50-54$ | 93.2 | 3.3 | 0.1 | 3.5 |
| $55-59$ | 92.3 | 3.5 | 0.3 | 3.9 |
| $60-64$ | id | id | id | id |
| $65-69$ | 86.8 | 11.5 | 0.0 | 1.6 |
| BY REGION |  |  |  |  |
| Pacific | 88.6 | 3.6 | 3.5 | 4.4 |
| Mountain | 90.8 | 3.2 | 3.2 | 2.7 |
| West North Central | 91.5 | 3.8 | 3.5 | 2.2 |
| West South Central | 95.5 | 2.1 | 1.5 | 0.9 |
| East North Central | 91.8 | 3.8 | 1.8 | 2.6 |
| East South Central | 91.8 | 1.6 | 2.3 | 4.3 |
| Middle Atlantic | 9.5 | 3.2 | 2.1 | 3.2 |
| South Atlantic | 9.4 | 3.6 | 2.4 | 2.6 |
| New England | 90.6 | 4.6 | 1.6 | 3.2 |

NOTE: As of March 1, 2006. Excludes those fully retired or unemployed and not seeking employment. id = insufficient data to be meaningful. SOURCE: ACS salary survey 2006

WHERE CHEMISTS WORK
Academia is claiming a growing share of ACS working member chemists

| \% OF CHEMISTS | 2002 | 2003 | 2004 | 2005 | 2006 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MANUFACTURING | 55\% | 54\% | 56\% | 52\% | 51\% |
| Chemical \& related | 17 | 15 | 17 | 15 | 15 |
| Pharmaceutical/health/bio | 22 | 21 | 23 | 22 | 23 |
| Other manufacturing | 16 | 18 | 16 | 15 | 13 |
| ACADEMIA | 24 | 26 | 24 | 27 | 29 |
| University/four-year college | 19 | 20 | 18 | 21 | 20 |
| Two-year college | 2 | 2 | 2 | 2 | 3 |
| Medical school | 1 | 2 | 2 | 2 | 3 |
| High school | 2 | 2 | 2 | 2 | 2 |
| Other | na | na | na | na | 1 |
| NONMANUFACTURING/ NONACADEMIC | 20 | 20 | 17 | 21 | 18 |
| Analytical/research services | 9 | 9 | 9 | 9 | 7 |
| Government | 8 | 8 | 7 | 8 | 8 |
| Other | 3 | 3 | 1 | 3 | 3 |
| SELF-EMPLOYED |  | 1 | 3 | 1 | 2 |

NOTE: Percentage of chemists at all degree levels with full-time jobs as of March 1, 2006; data given as intergers because some of the sample sizes are small. na=data not available. SOURCE: ACS salary and employment surveys

## INDUSTRIAL SALARIES

Management pays the big bucks, and larger firms pay more

| \$ THOUSANDS | BACHELOR'S | MASTER'S | PH.D. |
| :--- | ---: | ---: | ---: |
| BY WORK FUNCTION |  |  |  |
| Analytical services | $\$ 55.3$ | $\$ 76.1$ | $\$ 97.5$ |
| Applied research | 71.0 | 77.4 | 100.0 |
| Basic research | 60.0 | 81.7 | 108.0 |
|  |  |  |  |
| Chemical information | id | 94.0 | 90.0 |
| Computers | id | id | 91.0 |
| General management | 98.0 | 104.0 | 122.4 |
|  |  |  |  |
| Health \& safety | 70.9 | 94.2 | 118.2 |
| Marketing \& sales | 75.0 | 85.0 | 103.0 |
| Production/quality control | 62.8 | 79.0 | 96.7 |
| R\&D management | 90.3 | 103.0 | 129.0 |
|  |  |  |  |
| BY SIZE 0F EMPLOYER |  |  |  |
| Fewer than 50 employees | 58.0 | 63.3 | 95.0 |
| 50 to 99 | 55.7 | 66.7 | 90.0 |
| $\mathbf{1 0 0}$ to 499 | 62.5 | 79.0 | 100.0 |
| 500 to 2,499 | 65.0 | 83.0 | 105.0 |
|  |  |  |  |
| 2,500 to 9,999 | 65.0 | 87.7 | 104.0 |
| 10,000 to 24,999 | 72.0 | 86.3 | 108.0 |
| $25,000+$ | 79.8 | 85.4 | 110.4 |

NOTE: Median full-time salaries as of March 1, 2006. id = insufficient data to be meaningful. SOURCE: ACS salary survery 2006

SALARIES OF ALL CHEMISTS BY EXPERIENCE
Pay tends to plateau at 30 years beyond the bachelor's degree

| \$ THOUSANDS | Years since bachelor's degree |  |  |  |  |  |  |  |  | ALL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | $40+$ |  |
| BY GENDER |  |  |  |  |  |  |  |  |  |  |
| Men | \$53.2 | \$59.2 | \$73.1 | \$84.0 | \$95.0 | \$96.1 | \$102.0 | \$102.5 | \$100.0 | \$90.0 |
| Women | 45.0 | 54.6 | 68.0 | 75.0 | 81.7 | 82.0 | 84.6 | 82.0 | 81.8 | 71.1 |
| BY DEGREE |  |  |  |  |  |  |  |  |  |  |
| Bachelor's | 44.5 | 50.8 | 65.1 | 71.1 | 72.0 | 84.8 | 83.0 | 80.0 | 82.2 | 65.2 |
| Master's | 55.0 | 60.0 | 67.0 | 74.6 | 85.0 | 85.0 | 85.2 | 85.0 | 90.0 | 77.5 |
| Ph.D. | 89.3 | 70.0 | 77.0 | 89.0 | 96.1 | 102.0 | 110.0 | 105.0 | 100.5 | 95.0 |
| BY EMPLOYER |  |  |  |  |  |  |  |  |  |  |
| Industry/ business | 48.9 | 60.0 | 78.0 | 90.6 | 98.0 | 102.0 | 108.0 | 106.8 | 107.8 | 93.0 |
| Government | id | 59.8 | 70.0 | 78.5 | 90.0 | 92.0 | 87.3 | 98.0 | 111.0 | 87.9 |
| Academia | 44.8 | 48.0 | 51.0 | 59.0 | 68.5 | 68.8 | 70.0 | 80.0 | 87.5 | 67.0 |

NOTE: Median full-time salaries as of March 1, 2006. id = insufficient data to be meaningful.
SOURCE: ACS salary survey 2006

## SALARY SPREAD FOR INDUSTRIAL CHEMISTS

Highest paid 20\% of chemists earn about twice or more that of lowest paid 20\%

| \$ THOUSANDS | YEARS SINCE BACHELOR'S DEGREE |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-40 | 40+ | ALL |
| BACHELOR'S |  |  |  |  |  |  |  |  |  |  |
| First 20\% | \$65.0 | \$72.5 | \$92.2 | \$100.0 | \$110.0 | \$120.0 | \$126.5 | \$135.0 | \$144.0 | \$109.0 |
| Second 20\% | 56.5 | 61.0 | 75.0 | 85.0 | 95.0 | 101.6 | 105.0 | 105.6 | 119.0 | 88.2 |
| Third 20\% | 46.0 | 51.3 | 66.0 | 71.8 | 74.0 | 87.0 | 85.8 | 83.1 | 92.8 | 67.0 |
| Fourth 20\% | 38.0 | 44.8 | 50.5 | 60.0 | 60.0 | 70.0 | 65.0 | 61.0 | 75.0 | 51.0 |
| Fifth 20\% | 30.5 | 37.0 | 43.0 | 45.0 | 49.0 | 60.0 | 52.0 | 40.9 | 58.4 | 40.5 |
|  |  |  |  |  |  |  |  |  |  |  |
| MASTER'S |  |  |  |  |  |  |  |  |  |  |
| First 20\% | id | \$73.5 | \$88.7 | \$98.0 | \$125.0 | \$122.7 | \$136.0 | \$146.0 | \$130.0 | \$123.0 |
| Second 20\% | id | 68.5 | 82.4 | 90.2 | 103.0 | 109.0 | 118.3 | 115.0 | 110.0 | 100.0 |
| Third 20\% | id | 60.3 | 71.0 | 78.1 | 90.5 | 88.0 | 95.0 | 95.0 | 98.6 | 82.0 |
| Fourth 20\% | id | 52.0 | 61.8 | 65.0 | 74.0 | 75.0 | 79.4 | 74.0 | 79.0 | 65.8 |
| Fifth 20\% | id | 43.0 | 50.0 | 55.0 | 64.2 | 60.0 | 62.0 | 65.0 | 55.0 | 55.0 |
|  |  |  |  |  |  |  |  |  |  |  |
| PH.D. |  |  |  |  |  |  |  |  |  |  |
| First 20\% | id | \$94.1 | \$110.0 | \$139.4 | \$145.5 | \$165.4 | \$178.0 | \$157.0 | \$175.0 | \$155.0 |
| Second 20\% | id | 87.3 | 104.0 | 115.0 | 124.6 | 140.0 | 145.0 | 135.0 | 136.0 | 128.0 |
| Third 20\% | id | 77.8 | 92.0 | 99.7 | 108.0 | 112.0 | 120.0 | 116.0 | 111.4 | 105.5 |
| Fourth 20\% | id | 70.0 | 77.0 | 87.9 | 92.0 | 96.0 | 102.4 | 96.2 | 90.0 | 89.9 |
| Fifth 10\% | id | 53.5 | 67.0 | 73.0 | 80.0 | 82.0 | 88.0 | 81.0 | 70.6 | 74.0 |

HOW TO READ THIS TABLE: Using the example of bachelor's chemists five to nine years after they have received their bachelor's degrees: The $20 \%$ best paid chemists had a median salary of $\$ 72,500$, whereas the $20 \%$ worst paid had a median salary of $\$ 37,000$. NOTE: Median salaries as of March 1, 2006. id = insufficient data to be meaningful.
SOURCE: ACS salary survey 2006

## BONUSES

Almost half of chemists received bonuses in 2005

|  | INDUSTRY |  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | MANUFACTURING NONMANOACTURING | GOVERNMENT ACADEMIA | ALL |  |  |  |  |  |  |  |  |
| Eligible for bonus | $72 \%$ | $60 \%$ | $39 \%$ | $14 \%$ | $52 \%$ |  |  |  |  |  |  |
| Percent of those eligible <br> who received a bonus | 95 | 87 | 87 | 84 | 92 |  |  |  |  |  |  |
| Percent of all chemists <br> who received a bonus | 68 | 52 | 34 | 12 | 48 |  |  |  |  |  |  |
| Median bonus awarded | $\$ 8,000$ | $\$ 5,000$ | $\$ 2,000$ | $\$ 3,000$ | $\$ 6,800$ |  |  |  |  |  |  |

[^2]biochemistry and materials science. In 1990, a lower 33\% of chemists worked in the "other" chemistry specialties, and just $15 \%$ had their highest degree in these specialties.

EVOLUTIONARY CHANGES have also occurred in the profile of where ACS member chemists work. There is a downward drift in those engaged in manufacturing, from $55 \%$ in 2002 to $51 \%$ in 2006. And there is an upward trend in those in academia, from $24 \%$ to $29 \%$ over the same period.

The employment profiles of subsets of the chemist workforce vary considerably, as would be expected. For instance, Ph.D.s are less likely to have full-time jobs, $90.3 \%$, than are bachelor's and master's graduates, $93.4 \%$ and $92.4 \%$, respectively. The difference is mainly due to the $3.6 \%$ of $\mathrm{Ph} . \mathrm{D}$. respondents who are on postdocs.

Similarly, fewer women, $89.8 \%$, have fulltime jobs than do men, $91.8 \%$. This variance is related to the higher percentage of women with part-time jobs, $5.7 \%$, compared with men, $2.7 \%$. By race, far more Asians are postdocs, $7.3 \%$, compared with $3.0 \%$ of blacks and $1.5 \%$ of whites.

By citizenship, $32.8 \%$ of respondents holding "other" visas are on postdocs. This compares with $4.2 \%$ of permanent residents, $1.0 \%$ of native-born citizens, and $0.6 \%$ of naturalized citizens.

By age, those with full-time jobs increase from almost $85 \%$ of 25 - to 29 -year-olds to a peak of almost $95 \%$ of 45 - to 49 -year-olds. By current or most recent employer, those in industry are somewhat more likely to be unemployed than are those in education or working for government.

Age appears to be an underlying factor in the rate of gain in the salaries of individual chemists who have had their jobs for a year or more.
The year-to-year increase in the median salaries of respondents to the 2006 survey of chemists who had not changed jobs and reported their salaries in both 2005 and 2006 was $8.1 \%$ for 20 - to 29 -year-olds. It sagged steadily to $3.3 \%$ for those 60 to 69 years old. Also, those with a bachelor's as their highest degree, who are generally younger, posted a $5.0 \%$ increase compared with $4.4 \%$ for Ph.D.s.

Women, also generally younger, posted a $5.0 \%$ gain compared with $4.6 \%$ for men.

The median salary of all female 2006 respondents was $\$ 71,100$, or $79 \%$ of the \$90,000 median for all male respondents. This percentage was up from $73 \% 10$ years earlier in 1996 when the medians were $\$ 45,700$ for women and $\$ 63,000$ for men.

When the salaries of groups of men and women chemists with the same degree, in

## COMPARE

## Chemical Engineers Are Better Paid Than Chemists

The small number of chemical engineers responding to the 2006 salary survey, about 300 , limits the amount of useful analysis that is possible. However, some broad comparisons with chemist respondents are possible. The most striking comparison this year, as always, is that of salaries.

Chemical engineers are just better paid. At the bachelor's degree level, the median salary of $\$ 80,000$ greatly exceeds the $\$ 65,200$ median for chemists. For master's, the gap is $\$ 100,000$ for chemical engineers compared with $\$ 77,500$ for chemists, and for Ph.D.s, \$109,200 versus $\$ 95,000$.

Part of this salary advantage for chemical engineers is the higher percentage of them working in higher paying industry jobs-78\% compared with 62\% of chemists.

Chemical engineers are only half as likely to be women as are chemists, $13 \%$ compared with $26 \%$. They are less likely to have a Ph.D., 53\% compared with 62\%.

The differences in the race and citizenship status of chemical engineers and chemists are small and not statistically sig-

CONTRAST
Chemical engineers earn more at all degree levels and are less likely to have Ph.D.s or be women

|  | CHEMISTS | CHEMICAL ENGINEERS |  | CHEMISTS | CHEMICAL ENGINEERS |
| :---: | :---: | :---: | :---: | :---: | :---: |
| BY EMPLOYMENT |  |  | BY CITIZENSHIP |  |  |
| Full-time | 91\% | 94\% | Native born | 79\% | 76\% |
| Part-time | 3 | 3 | Naturalized | 11 | 15 |
| Postdoc | 2 | 1 | Permanent resident | 7 | 5 |
| Unemployed/seeking | 3 | 2 | Other visa | 3 | 3 |
| BY EMPLOYER |  |  | BY RACE |  |  |
| Business/industry | 62 | 78 | American Indian | 0 | 0 |
| Government/other | 7 | 5 | Asian | 12 | 13 |
| Academia | 29 | 17 | Black | 2 | 3 |
| Self-employed | 2 | 0 | White | 84 | 81 |
|  |  |  | Other | 2 | 2 |
| BY GENDER |  |  |  |  |  |
| Men | 74 | 87 | BY ETHNICITY |  |  |
| Women | 26 | 13 | Hispanic | 3 | 5 |
| BY HIGHEST DEGREE |  |  | MEDIAN BASE SALAR |  |  |
| Bachelor's | 20 | 21 | Bachelor's | \$65,200 | \$80,000 |
| Master's | 18 | 26 | Master's | 77,500 | 100,000 |
| Ph.D. | 62 | 53 | Ph.D. | 95,000 | 109,200 |

Note: As of March 1, 2006. SOURCE: ACS salary survey 2006
nificant. For instance, $81 \%$ of chemical engineers are white, as are $84 \%$ of chemists. Also

91\% of chemical engineers are native-born or naturalized citizens as are $90 \%$ of chemists.

## FACULTY SALARIES BY GENDER

Women earn between 95 and $100 \%$ of men's salaries in most cases

| \$ THOUSANDS | MEN | WOMEN | WOMEN'S SALARIES AS \% OF MEN'S | \% WHO ARE WOMEN |
| :---: | :---: | :---: | :---: | :---: |
| B.A./B.S.-GRANTING SCHOOLS |  |  |  |  |
| Full professor | \$76.8 | \$75.0 | 98\% | 18\% |
| Associate professor | 57.8 | 55.0 | 95 | 38 |
| Assistant professor | 49.0 | 46.8 | 96 | 44 |
| M.S.-GRANTING SCHOOLS |  |  |  |  |
| Full professor | 82.0 | id | id | 9 |
| Associate professor | 57.8 | id | id | 42 |
| Assistant professor | 49.0 | id | id | 16 |
| PH.D.-GRANTING SCHOOLS |  |  |  |  |
| Full professor | 100.4 | 90.7 | 90 | 18 |
| Associate professor | 70.5 | 72.0 | 102 | 23 |
| Assistant professor | 60.0 | 60.0 | 100 | 33 |

NOTE: Median salaries for nine- or 10-month contracts as of March 1, 2006. id = insufficient data to be meaningful. SOURCE: ACS salary survey 2006

## EMPLOYEE FRINGE BENEFITS

Availability of benefits for chemists has changed little since 1998

| \% OF RESPONDENTS RECEIVING THE BENEFIT | MANUFACTURING/ INDUSTRY | NONMANUFACTURING | GOVERNMENT | HIGH SCHOOL | COLLEGE/ UNIVERSITY | 2006 ALL | 1998 ALL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PAID LEAVE |  |  |  |  |  |  |  |
| Holidays | 99\% | 98\% | 99\% | 79\% | 89\% | 96\% | 97\% |
| Vacations | 99 | 98 | 99 | 67 | 77 | 93 | 93 |
| Sick leave | 95 | 91 | 98 | 96 | 90 | 93 | 94 |
| Family sick leave | 72 | 68 | 89 | 80 | 68 | 72 | 67 |
| Newborn leave | 77 | 69 | 76 | 75 | 71 | 74 | 68 |
| Bereavement leave | 93 | 87 | 84 | 94 | 72 | 86 | 87 |
| Jury duty | 96 | 91 | 94 | 95 | 83 | 91 | 92 |

RETIREMENT/SAVINGS

| Savings plans | 97 | 92 | 89 | 83 | 90 | 93 | 91 |
| :--- | :--- | :--- | ---: | ---: | ---: | ---: | :---: |
| Employee stock ownership | 57 | 33 | 1 | 0 | 6 | 38 | 46 |
| Employer matching savings | 85 | 63 | 65 | 28 | 55 | 72 | 70 |
| Profit sharing | 41 | 24 | 3 | 1 | 4 | 27 | 33 |
| Stock options | 49 | 31 | 3 | 0 | 6 | 33 | 34 |
| Flexible spending accounts | 87 | 79 | 77 | 57 | 73 | 81 | 59 |
| Employer-defined pension | 63 | 36 | 80 | 61 | 52 | 58 | nm |
| Flexible benefits programs | 61 | 46 | 42 | 34 | 56 | 55 | 57 |

MEDICAL/DENTAL PLANS

| Employee medical coverage | 99 | 98 | 99 | 99 | 100 | 99 | 99 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Family medical coverage | 99 | 96 | 99 | 99 | 98 | 98 | 98 |
| Employee dental coverage | 97 | 92 | 85 | 96 | 96 | 95 | 92 |
| Family dental coverage | 97 | 91 | 84 | 94 | 94 | 94 | 91 |
| Employee vision coverage | 85 | 76 | 73 | 76 | 79 | 80 | 63 |
| Family vision coverage | 83 | 72 | 71 | 75 | 76 | 79 | 58 |
| Prescription drug program | 94 | 86 | 90 | 89 | 91 | 91 | 90 |
| Annual physical | 68 | 55 | 63 | 57 | 65 | 65 | 61 |
| Wellness/fitness program | 64 | 47 | 51 | 40 | 54 | 57 | 49 |

INSURANCE

| Employee life insurance | 95 | 89 | 95 | 90 | 93 | 93 | 94 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Family life insurance | 70 | 46 | 59 | 32 | 51 | 60 | 56 |
| Accidental death/dismemberment | 90 | 78 | 73 | 68 | 81 | 84 | 84 |
| Long-term-care insurance | 66 | 51 | 72 | 47 | 61 | 63 | 55 |
| Short-term disability | 88 | 77 | 58 | 65 | 75 | 80 | 78 |
| Long-term disability | 89 | 79 | 63 | 70 | 79 | 83 | 82 |

PROFESSIONAL DEVELOPMENT

| College tuition reimbursement | 83 | 64 | 64 | 58 | 68 | 74 | 77 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Cultural diversity training | 46 | 21 | 58 | 42 | 40 | 42 | 34 |
| Educational leave | 28 | 18 | 39 | 44 | 39 | 31 | 35 |
| In-house training | 85 | 70 | 91 | 79 | 73 | 80 | 80 |
| Outside training workshops | 90 | 77 | 90 | 87 | 65 | 82 | 85 |
| Professional association dues | 80 | 62 | 31 | 39 | 35 | 62 | 60 |
| Sabbatical leave | 12 | 10 | 18 | 46 | 73 | 29 | 28 |
| Travel to meetings | 92 | 83 | 90 | 68 | 86 | 88 | 89 |

## OTHER PROGRAMS

| Benefit sharing | 6 | 7 | 31 | 5 | 13 | 10 | 9 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Employee assistance | 71 | 50 | 77 | 28 | 36 | 59 | 56 |
| Ergonomic equipment | 69 | 48 | 69 | 8 | 32 | 56 | 47 |
| Flexible work hours | 72 | 73 | 80 | 8 | 60 | 69 | 64 |
| Job sharing | 20 | 7 | 13 | 13 | 8 | 15 | 12 |
| Off-site child care | 16 | 5 | 15 | 3 | 14 | 14 | 12 |
| On-site child care | 16 | 6 | 24 | 11 | 34 | 19 | 12 |
| Personal protective equipment | 93 | 73 | 87 | 39 | 60 | 81 | 81 |

$\mathrm{nm}=$ not meaningful. SOURCE: ACS salary surveys 1998 and 2006

## FRINGE BENEFITS: WHAT THE EMPLOYER PAYS

Employers are becoming a little less likely to cover all the costs of a benefit

|  | EMPLOYERS PAYING ALL |  | EMPLOYERS PAYING NONE |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1998 | 2006 | 1998 | 2006 |
| MEDICAL/DENTAL PLANS |  |  |  |  |
| Employee medical coverage | 28\% | 16\% | 2\% | 2\% |
| Family medical coverage | 13 | 7 | 8 | 7 |
| Employee dental coverage | 24 | 15 | 9 | 9 |
| Family dental coverage | 14 | 8 | 13 | 12 |
| Employee vision coverage | 19 | 12 | 22 | 18 |
| Family vision coverage | 11 | 7 | 28 | 21 |
| Prescription drug program | 16 | 12 | 6 | 7 |
| Annual physical | 43 | 29 | 15 | 18 |
| Wellness/fitness program | 24 | 19 | 30 | 29 |
| INSURANCE |  |  |  |  |
| Employee life insurance | 44 | 37 | 9 | 11 |
| Family life insurance | 6 | 5 | 48 | 49 |
| Accidental death/dismemberment | 39 | 32 | 18 | 20 |
| Long-term-care insurance | 16 | 11 | 37 | 46 |
| Short-term-care disability | 46 | 37 | 15 | 19 |
| Long-term disability | 32 | 29 | 19 | 21 |
| PROFESSIONAL DEVELOPMENT |  |  |  |  |
| College tuition reimbursement | 46 | 37 | 5 | 7 |
| Cultural diversity training | 66 | 65 | 28 | 27 |
| Educational leave | 14 | 14 | 52 | 57 |
| In-house training | 90 | 89 | 5 | 6 |
| Outside training workshops | 80 | 76 | 6 | 7 |
| Professional association dues | 66 | 67 | 18 | 19 |
| Sabbatical leave | 22 | 21 | 44 | 52 |
| Travel to meetings | 79 | 77 | 4 | 5 |
| OTHER PROGRAMS |  |  |  |  |
| Benefit sharing | 16 | 14 | 71 | 67 |
| Employee assistance | 61 | 61 | 11 | 14 |
| Ergonomic equipment | 79 | 81 | 14 | 15 |
| Flexible work hours | 77 | 75 | 18 | 20 |
| Job sharing | 33 | 31 | 62 | 65 |
| Off-site child care | 2 | 2 | 77 | 81 |
| On-site child care | 3 | 3 | 79 | 80 |
| Protective equipment | 88 | 88 | 4 | 6 |

SOURCE: ACS salary survey 2006

## INDUSTRIAL SALARIES BY EXPERIENCE AND GENDER

## When adjusted for years of experience, women's salaries average $94 \%$ of

 men's| YEARS SINCE | BACHELOR'S |  |  | MASTER'S |  |  | PH.D. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BACHELOR'S DEGREE | MEN | WOMEN | WOMEN AS \% OF MEN | MEN | WOMEN | WOMEN AS \% OF MEN | MEN | WOMEN | WOMEN AS \% OF MEN |
| 2-4 | \$48.0 | \$44.0 | 92\% | id | id | id | id | id | id |
| 5-9 | 51.5 | 51.3 | 100 | \$60.7 | \$60.2 | 99\% | \$80.0 | \$73.8 | 92\% |
| 10-12 | 66.0 | 62.3 | 94 | 72.1 | 69.5 | 96 | 93.0 | 89.0 | 96 |
| 15-19 | 71.0 | 75.0 | 106 | 80.7 | 74.3 | 92 | 100.0 | 97.2 | 97 |
| 20-24 | 79.1 | 69.4 | 88 | 94.4 | 79.5 | 84 | 109.0 | 103.0 | 95 |
| 25-29 | 87.0 | 79.9 | 92 | 91.2 | 80.0 | 88 | 113.3 | 110.0 | 97 |
| 30-34 | 88.0 | 82.5 | 94 | 95.0 | 100.0 | 105 | 121.0 | 112.2 | 93 |
| 35-39 | 89.0 | id | id | 92.5 | id | id | 118.0 | 100.0 | 85 |
| 40+ | 101.7 | id | id | 98.6 | id | id | 114.5 | id | id |

NOTE: Median salaries in thousands of dollars for chemists with full-time industrial jobs as of March 1, 2006. id = insufficient data to be meaningful. SOURCE: ACS salary survey 2006
the same type of work, and with the same amount of experience are compared, the gender differentials become far smaller. Female Ph.D. industrial chemists earn between 92 and $97 \%$ as much as their male colleagues for all five-year age groups up to 30 to 34 years beyond receipt of the bachelor's degree. Women master's chemists receive between 84 and $105 \%$, and women bachelor's chemists between 88 and $106 \%$.

The pattern is the same in academia. At bachelor's-granting institutions, the median nine- or 10 -month contract for female full professors of $\$ 75,000$ is $98 \%$ of the $\$ 76,800$ median for men. At Ph.D.-granting departments, the gap is wider: $\$ 90,700$ for women and $\$ 100,400$ for men.
The big problem women still have is in becoming full professors. At both bachelor'sand Ph.D.-granting schools, only $18 \%$ of full professors are women.

About half of all working chemists received bonuses in 2006. The share ranged from $12 \%$ of academic chemists to $68 \%$ of chemists in manufacturing. The median bonus for those who received one was $\$ 6,800$. Industrial chemists did a little better at $\$ 8,000$; academics received $\$ 3,000$; and government employees, $\$ 2,000$.

THE 2006 SURVEY precisely repeated a study of fringe benefits conducted as part of the 1998 salary survey. The questionnaires for both surveys asked respondents to identify the fringe benefits available to them. They also asked how the cost of the benefits was handled: fully paid by the employer, partially paid by the employer, or paid by the respondent.

The responses from those with full-time jobs indicated little change in the availability of benefits over the eight-year span. The availability of the more than 40 benefits queried moved up slightly from an average of $65 \%$ to $67 \%$. The availability of employee medical coverage remained at $99 \%$ in both surveys and of family medical coverage at $98 \%$. The average for nine different medical benefits moved up from $78 \%$ to $84 \%$. The availability of six insurance programs moved up slightly from an average of $75 \%$ to $77 \%$.
For all 40 -plus programs, on average, $39 \%$ were paid fully by the employer in 1998. This declined to $35 \%$ in 2006. The average paid fully by respondents rose nominally from $25 \%$ to $26 \%$.
For the big-money medical programs, the percentage paid fully by the employer fell from an average of $21 \%$ in 1998 to $14 \%$ in 2006. The percentage paid fully by respondents also fell slightly from $15 \%$ to $14 \%$. The gain was in programs partially paid for by employers, from $64 \%$ to $72 \%$

## ACS Career Services: Workforce Publications

SALARIES The ACS annually surveys the ACS membership, gathering detailed employment and salary information on member chemists and chemical engineers living in the U.S. The reports describe the respondents' employment status, employer, work function, specialization, salary, and demographic characteristics. Reports are available each year from 1973 through the current year.

STARTING SALARIES The ACS surveys new graduates in chemistry and chemical engineering each year and publishes reports detailing the graduates' employment status, post-graduate plans, starting salaries, and other employment and demographic characteristics. Reports are available for each year from 1975.

MILLENNIUM SERIES A series of reports drawn from special studies that detail members' employment characteristics at the turn of the millennium.

ChemCensus 2005: An analysis of the 2005 ChemCensus, looking at over 25 years of the chemistry workforce.

Industrial Chemists 2005: An analysis of the 2005 ChemCensus, focusing on 25 years of the industrial chemistry workforce.

Academic Chemists 2005: An analysis of the 2005 ChemCensus, focusing on 25 years of the academic chemistry workforce.

Lifetimes in Chemistry 1999-2000: A report drawn from the 1999 study of ACS members, aged 50 through 69.

Early Careers of Chemists 2001: A detailed look at the education and early careers of ACS members under age 40, drawn from a survey conducted in 2001.

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For prices and ordering information, please call or write:
ACS Office of Society Services
1155 16th Street NW
Washington, DC 20036
Phone: 800.227.5558 or 202.872.4600
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[^0]:    ${ }^{1}$ Heylin, Michael, "Employment \& Salary Survey," Chemical \& Engineering News, September 18, 2006, pp. 42-51.

[^1]:    na = data not available. SOURCES: ACS censuses; ACS salary survey 2006

[^2]:    SOURCE: ACS salary survey 2006

