# 2006 Salaries survey

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

American Chemical Society
Committee on Economic and Professional Affairs

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Available from the ACS Office of Society Services

# Contents

# Acknowledgements

This report presents detailed results of the 2006 ACS Comprehensive Salary and Employment Status Survey.

The ACS 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. Richard Ellis was instrumental in helping incorporate missing data into the dataset, thus improving the reliability of the findings. 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

Results 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 NOTES ON DATA COLLECTED**

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.

**ALL CHEMISTS**

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 that of the previous year, as reported by Michael Heylin in *Chemical & Engineering News*[1] regarding the 2005 salary data. 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. CHANGE IN ALL CHEMISTS' SALARIES, 2005–2006**

| Degree | Median Salary 2006 (2005) | % Change from 2005 In Constant Dollars | % Change from 2005 In Current Dollars (3.4% rate of inflation) |
|---|---|---|---|
| Total | $86,500 (83,000) | up 4.2 | up 0.8 |
| Bachelor's | $66,300 (63,000) | up 5.2 | up 1.8 |
| Master's | $78,000 (74,000) | up 5.4 | up 2.0 |
| Doctorate | $96,000 (93,000) | up 3.2 | down 0.2 |

[1] Heylin, Michael, "Employment & Salary Survey," *Chemical & Engineering News*, September 18, 2006, pp. 42–51.

**TABLE 2. CHANGE IN INDUSTRIAL/PRIVATE SECTOR CHEMISTS' SALARIES, 2005–2006**

| Degree | Median Salary 2006 (2005) | % Change from 2005 In Constant Dollars | % Change from 2005 In Current Dollars (3.4% rate of inflation) |
|---|---|---|---|
| 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 | $108,000 (103,000) | up 4.9 | up 1.5 |

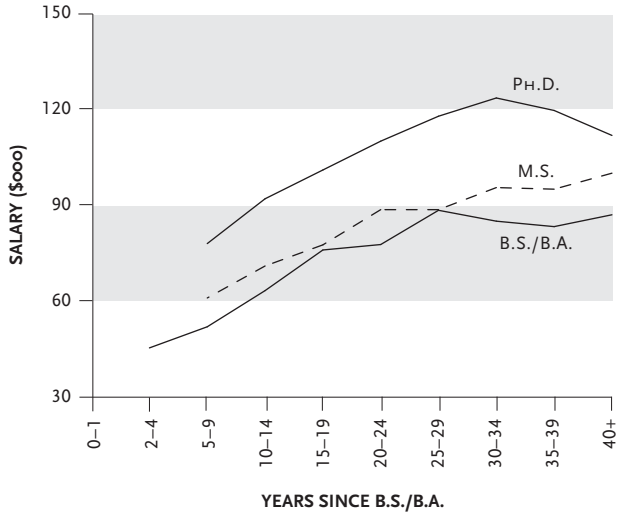
As Table 1 shows, there were differences in the percentage of salary change by level of degree in 2006. Ph.D.s in chemistry comprise a large portion of our survey's population; therefore their data weighs heavily on the overall median. Because doctorate salaries are barely compensating for inflation, the overall salary for all chemists is repressed. The median doctorate salary is $96,000 in 2006 compared to $93,000 in the preceding year, representing 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 5.4% gain over 2005 reported salaries, and a 2.0% gain when inflation is factored in.

## 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

**FIGURE 1. 2006 INDUSTRIAL CHEMISTS' SALARIES BY YEARS SINCE B.S./B.A. AND BY HIGHEST DEGREE**



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 industrial sector. Proportionate to salary, this increase had the greatest impact for doctorate's recipients and the smallest impact for holders of master's degrees.

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. Ph.D. salaries are substantially higher; however, 30 years after earning a Ph.D., industrial salaries appear to reach their maximum earning potential, beginning to fall slightly afterwards.

## ACADEMIC CHEMISTS

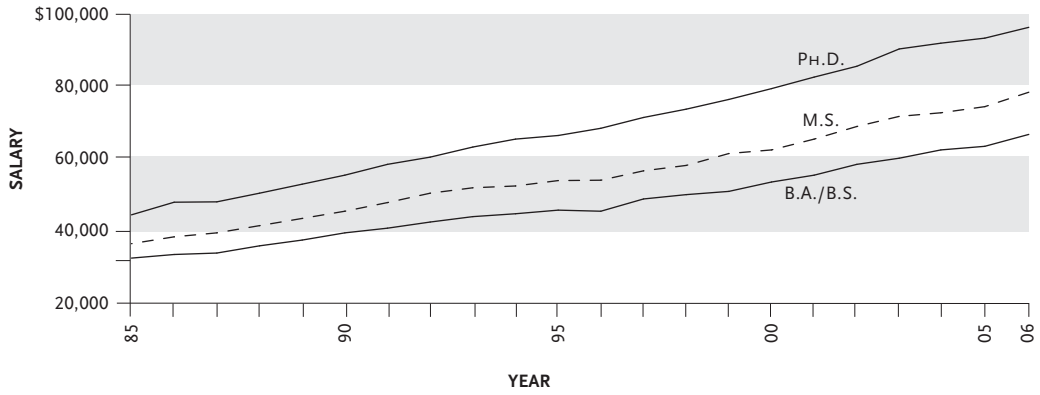
How do academic salaries compare with those of private sector employees? Table 3 shows the median salaries of Ph.D. chemists by faculty rank. Compared to private sector chemists, salary increases in academia tended to be somewhat weaker. However, the overall picture is not clear. Assistant professors on a 9 to 10 month salary base reported increases of 4.1% in current dollars over 2005 salaries (0.7% higher than the rate of inflation), while salaries for those on an 11 to 12 month base decreased 3.1% in current dollars (for a total of 6.5% less in buying power when inflation is factored in). Associate professors at the 9 to 10 month level, on the other hand, experienced no real increase over last year (up 3.4% in current dollars to $60,000, essentially keeping pace with inflation), while salaries for those at the 11 to 12 month level rose 2.5% to $82,000 (slightly below inflation). Chemists with full professorships also had inconsistent numbers. While those paid by the academic year earned less than the preceding year ($86,460 in constant dollars, 0.5% less than the rate of inflation), those paid for the entire calendar year reported an increase to $124,447 in current dollars, or 1.2% over inflation. The reason for this pattern is not clear, although it emphasizes the importance of looking at such levels of detail when comparing academic salaries.

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

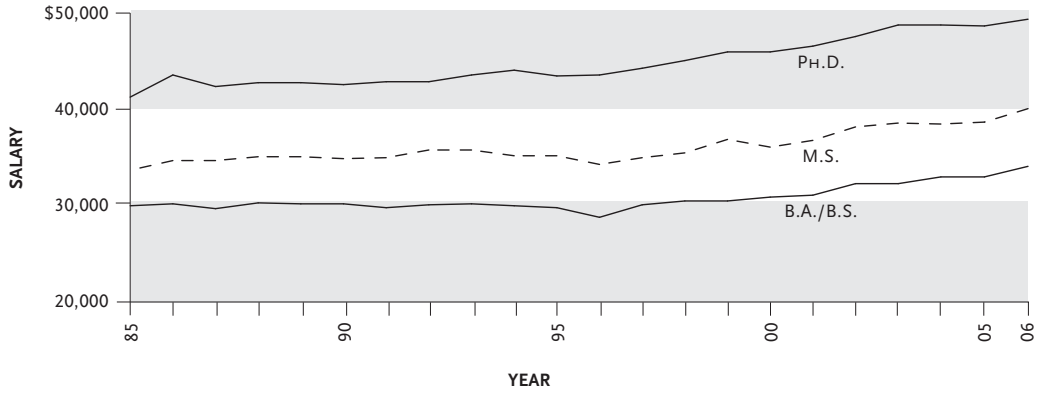
| Rank/ Contract | Median Salary 2006 (2005) | % Change from 2005 In Constant Dollars | % Change from 2005 In Current Dollars (3.4% rate of inflation) |
|---|---|---|---|
| Full 9/10 | $86,460 (84,000) | up 2.9 | down 0.5 |
| Full 11/12 | $124,477 (119,000) | up 4.6 | up 1.2 |
| Assoc 9/10 | $60,000 (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 | $63,000 (65,000) | down 3.1 | down 6.5 |

**FIGURE 2. CHEMISTS' MEDIAN SALARIES IN CURRENT AND CONSTANT 1984 DOLLARS**

**(CURRENT YEAR DOLLARS)**




**(CONSTANT 1984 DOLLARS)**



## OTHER FACTORS INFLUENCING SALARY

Tables 1–3 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 shows, 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 (See Tables 1.1.1 to 1.1.3 in Appendix).

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 in evaluating one's current salary.

## TRENDS IN CHEMISTS' SALARIES

The median salaries of chemists have generally increased every year in constant dollars since 1984. Figure 2 displays the amount of the increase by degree level. As shown in the top half of this figure, salaries for chemists (in current dollars) have more than doubled over the last two decades. Within these increases, the differences between degree levels appear to have widened.

However, the lower half of Figure 2 puts the increases into context by showing median salaries in 1984 dollars, and indicates that chemist salaries have held relatively constant with inflation since 1985. Not until 2002 did salaries at all degree levels begin to increase above the inflation rate. This real increase occurred at all degree levels but perhaps most notably among Ph.D.s. 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.

# Non-Salary Income

**CONSULTING**

Salary data do not provide a complete picture of the earning potential of chemists. A significant number of employers that provide yearly bonuses to supplement their salaries. Some chemists also seek freelance work outside of their primary employment. This section of the survey 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 paychecks during the summer. Almost one in five (18.5%) college and university 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 earned a median of $44,000.

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 a median rate of $85 an hour. Master's recipients charged $90 and Ph.D.s $125 hourly. Ph.D.s 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 60 charged $150 an hour.

**TABLE 4. CONSULTING DONE IN 2006**

| | % Who Consult | Median Hourly Rate | Median Income |
|---|---|---|---|
| All chemists | 8.0% | $110 | $9,000 |
| Degree | | | |
| B.S. | 6.0% | $85 | $24,000 |
| M.S. | 4.7% | $90 | $22,500 |
| Ph.D. | 10.6% | $125 | $5,650 |
| Employer | | | |
| Industry–mfg. | 3.1% | $100 | $9,400 |
| Industry–non mfg. | 5.8% | $108 | $44,000 |
| 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 | | | |
| 20–29 | 2.1% | $28 | $4,500 |
| 30–39 | 4.4% | $100 | $3,750 |
| 40–49 | 7.1% | $105 | $8,000 |
| 50–59 | 10.0% | $104 | $10,000 |
| 60–69 | 15.5% | $150 | $12,000 |

Note: This year's respondents were asked for previous year's consulting.

**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.

Of those who earned a bonus, the typical amount for chemists with a bachelor's degree was $4,000. Typically, master's recipients earned $6,000, and Ph.D.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 Ph.D.s 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. Ph.D.s 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. Non-manufacturing industries awarded a median of $5,000 in bonuses to their chemists. 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 10-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.

**TABLE 5. BONUSES RECEIVED IN 2006**

| | % Eligible | % of Eligible Received | Median 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 |
| Ph.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. | 13.4% | 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.

The median 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 greater representation among some of the less-compensated categories (degree level, employment sector, and age).

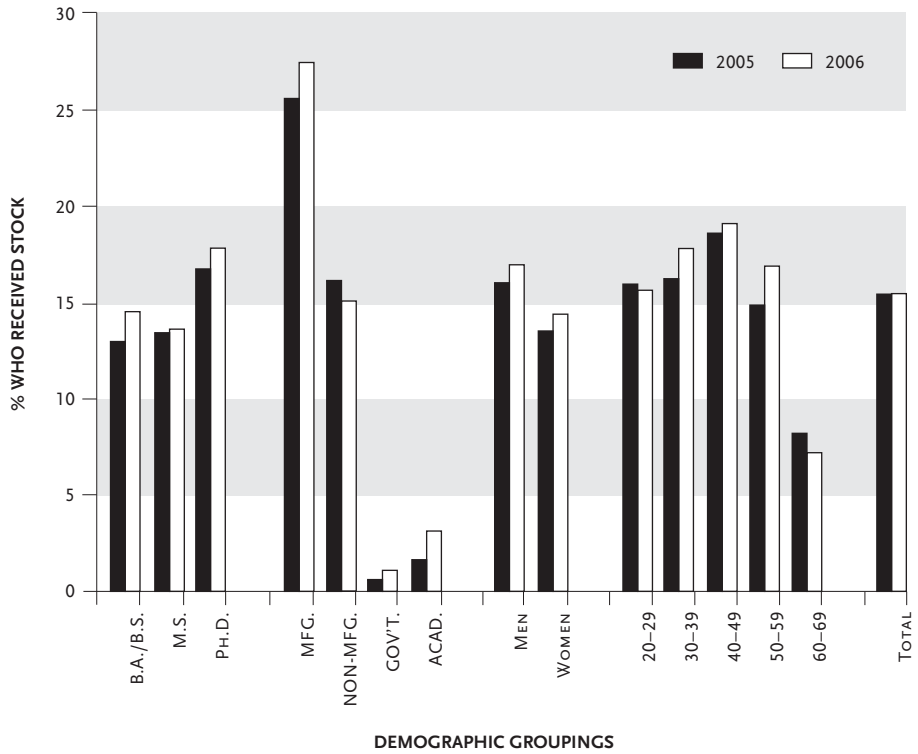
## STOCK AS PART OF PROFESSIONAL INCOME

Another method of compensating employees is to offer company stock. In the 2001 survey, ACS began asking our members about stock options they received. 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. Ph.D.s 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.

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




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

# Employment and Unemployment

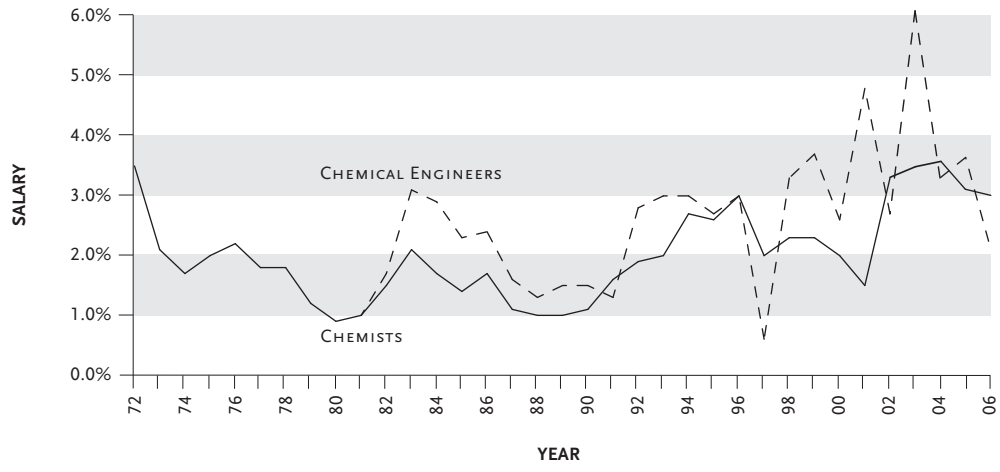
**EMPLOYMENT STATUS**

In 2006 86.9% of chemists surveyed were employed in full-time positions. This is comparable to the past couple of years, but is 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 part-time. 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 1980s 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 2006 3% 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 few years.

**FIGURE 4. UNEMPLOYMENT RATES FOR CHEMISTS AND CHEMICAL ENGINEERS, 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.

# Technical Notes

**THE SAMPLE**

The target population of the 2006 ACS Comprehensive Salary and Employment Status Survey was ACS regular members under the age of 70 who have U.S. mailing addresses and have neither student, retired, nor emeritus membership status. For the 2006 survey, 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, for 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, omits 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.

**DISCREPANCIES AMONG TABLES**

Some pairs of tables contain totals that should be identical but are not. For example, two tables that represent information about Ph.D. respondents might show different total numbers of respondents. 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 even the same respondents) who 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.

**NONRESPONSE BIAS**

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 statistical analysis of the difference between the mean salaries of the two groups found that there is no significant difference. The percentage in both groups that were unemployed was also the same: 1.6%.

# List of Abbreviations Used in 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 DEGREE AND WORK SPECIALTIES** | 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 |

**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** | — |

**WORK FUNCTIONS**

| Abbreviation | Employer |
|---|---|
| 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
- Alaska
- California
- Hawaii
- Oregon
- Washington

Mountain
- Arizona
- Colorado
- Idaho
- Montana
- Nevada
- New Mexico
- Utah
- Wyoming

West North Central
- Iowa
- Kansas
- Minnesota
- Missouri
- Nebraska
- North Dakota
- South Dakota

West South Central
- Arkansas
- Louisiana
- Oklahoma
- Texas

East North Central
- Illinois
- Indiana
- Michigan
- Ohio
- Wisconsin

East South Central
- Alabama
- Kentucky
- Mississippi
- Tennessee

Middle Atlantic
- New Jersey
- New York
- Pennsylvania

South Atlantic
- Delaware
- District of Columbia
- Florida
- Georgia
- Maryland
- North Carolina
- South Carolina
- Virginia
- West Virginia

New England
- Connecticut
- Maine
- Massachusetts
- New Hampshire
- Rhode Island
- Vermont

# List of Tables

# ACS Career Services: Workforce Publications

**SALARIES** ACS annually surveys its 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.

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