2007 Salaries Survey

Analysis of the American Chemical Society's 2007 Comprehensive Salary and Employment Status Survey

American Chemical Society
Committee on Economic and Professional Affairs

Salaries 2007

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Contents

Acknowledgements

This report presents detailed results of the 2007 ACS Comprehensive Salary and Employment Status Survey. The ACS Committee on Economic and Professional Affairs 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. Jeffrey Allum, research manager, 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 Gareth Edwards. Blake Stenning of Pittny Creative designed the report. Eric Stewart provided copyediting services.

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Summary and Comments

Results from the annual ACS Comprehensive Salary and Employment Status Survey indicate that salaries for chemists have leveled off after several years of moderate growth. In 2007, reported salaries for chemists rose at or below inflation. Unemployment dropped to 2.4 percent – the lowest reported rate since 2001. This indicates improving employment and perhaps an uptick in demand for chemists in recent years.

ALL CHEMISTS

The median salary for all chemists responding to the ACS 2007 membership survey was $89,000 in 2007. While this represents an increase of $2,500 from 2006 salaries ($86,500), it barely compensates for the inflation rate of 2.8%. In constant dollar terms, the salaries of all chemists only rose by 0.1% during the year. So while unemployment seems to be on the decline, the purchasing power of chemists is struggling to keep par with inflation, a fact reflected in Michael Heylin's in *Chemical & Engineering News* regarding the 2007 salary data. At best, increased employment paired with stagnating wages creates a mixed message regarding the economy for chemists.

As Table 1 shows, there was almost no difference in the percentage of salary change by level of degree in 2007. Almost all degree levels saw real wage increases of about 2.6%. But this only serves as a possible indicator of a trend towards wage stagnation, or possibly the resurgence of stagflation. Not every respondent indicated his or her degree. So, although wages increased by an average of 2.9 among all chemists responding to the survey, the reported salary increases among only those who reported degrees were slightly lower, averaging 2.6 for each degree category. The median doctorate salary was $98,500 in 2007 compared to $96,000 in the preceding year, representing a decrease of 0.2% after adjusting for inflation. Chemists at other degree levels all saw similar wage changes. Those whose highest degree is a bachelor's reported a median salary of $68,000. This is 2.6% higher than last year but about 0.2% lower than inflation. Master's recipients earned $80,000 in 2007, an increase from $78,000.

TABLE 1. CHANGE IN ALL CHEMISTS' SALARIES, 2006–2007

Degree	Median Salary 2007 (2006)		% Change from 2006 In Current Dollars	% Change from 2006 In Constant Dollars (2.8% rate of inflation)
Total	$89,000	(86,500)	up 2.9	up 0.1
Bachelor's	$68,000	(66,300)	up 2.6	down 0.2
Master's	$80,000	(78,000)	up 2.6	down 0.2
Doctorate	$98,500	(96,000)	up 2.6	down 0.2

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 2006 and 2007. For all degree levels, salaries increased between $2,000 and $5,000 in the industrial sector. Proportionate to salary, this increase had the greatest impact for master's recipients and the smallest impact for holders of bachelor's and Ph.D.s. In particular, chemists sporting master's degrees received a real wage increase of 2.7%, growing from a median of $82,560 to $87,100.

TABLE 2. CHANGE IN INDUSTRIAL/PRIVATE SECTOR CHEMISTS' SALARIES, 2006–2007

Degree	Median Salary 2007 (2006)	% Change from 2005 In Constant Dollars	% Change from 2005 In Current Dollars (2.8% rate of inflation)
Bachelor's	$70,000 (67,966)	up 3.0	up 0.2
Master's	$87,100 (82,560)	up 5.5	up 2.7
Doctorate	$110,000 (108,000)	up 1.9	down 0.9

FIGURE 1. 2007 INDUSTRIAL CHEMISTS' SALARIES BY YEARS SINCE B.S./B.A. AND BY HIGHEST DEGREE

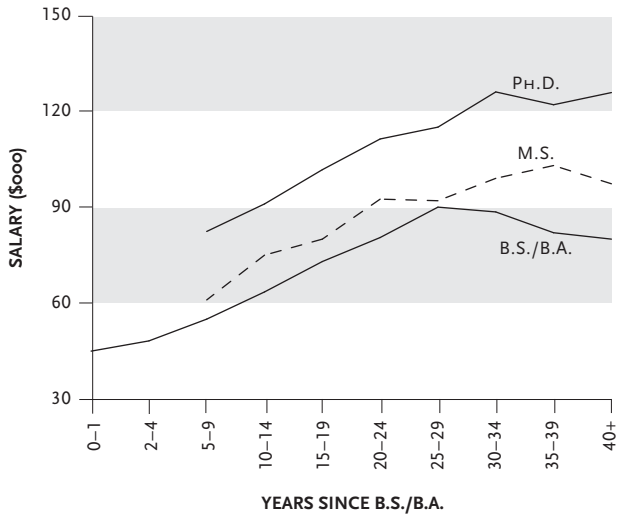


Figure 1 introduces another factor with a bearing on salary: amount of experience. As the number of years since earning a degree increases, salary generally rises as well. The pattern is similar for all levels of degrees. Master's salaries are slightly higher than bachelor's salaries. Ph.D. salaries are substantially higher; however, 30 years after earning a Ph.D., holders of doctorate degrees appear to reach their maximum earning potential, either falling or reaching a plateau.

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 changes in academia were very erratic and ranged anywhere from rising 8.3% to dropping almost six percent. In particular, 9-to-10 month associate professors saw a wage increase of almost 8.3% from $60,000 to $65,000. This accounts for a real wage increase of 5.5%, a relatively large increase for one year. At the same time, these salaries for 11-to-12 month associate professors continued to drop. These salaries posted the biggest salary decrease among academics: from $82,000 in 2006 to $76,800 in 2007 (a 6.3% drop). Assistant professors at the 9-to-10 month level, on the other hand, experienced a wage increase from $52,045 to $53,000, a modest increase of 1.8%, but a real wage decrease of 1.0%. Meanwhile, salaries for those assistant professors at the 11-to-12 month level rose 3.2% to $65,000 (slightly above inflation).

Chemists with full professorships had a negative change in salaries at the 11-to-12 month employment level. While those paid by the academic year (9-to-10 months) earned more than the preceding year ($89,000 in current dollars, 0.1% greater than the rate of inflation), those paid for the entire calendar year reported a decrease to $119,200 in current dollars, or a decrease of 4.2%. The reason for this seeming discrepancy is not clear, although it could be due to a survey sampling, or a recent trend toward part-time professorship over full-time, or some unknown factor.

OTHER FACTORS INFLUENCING SALARY

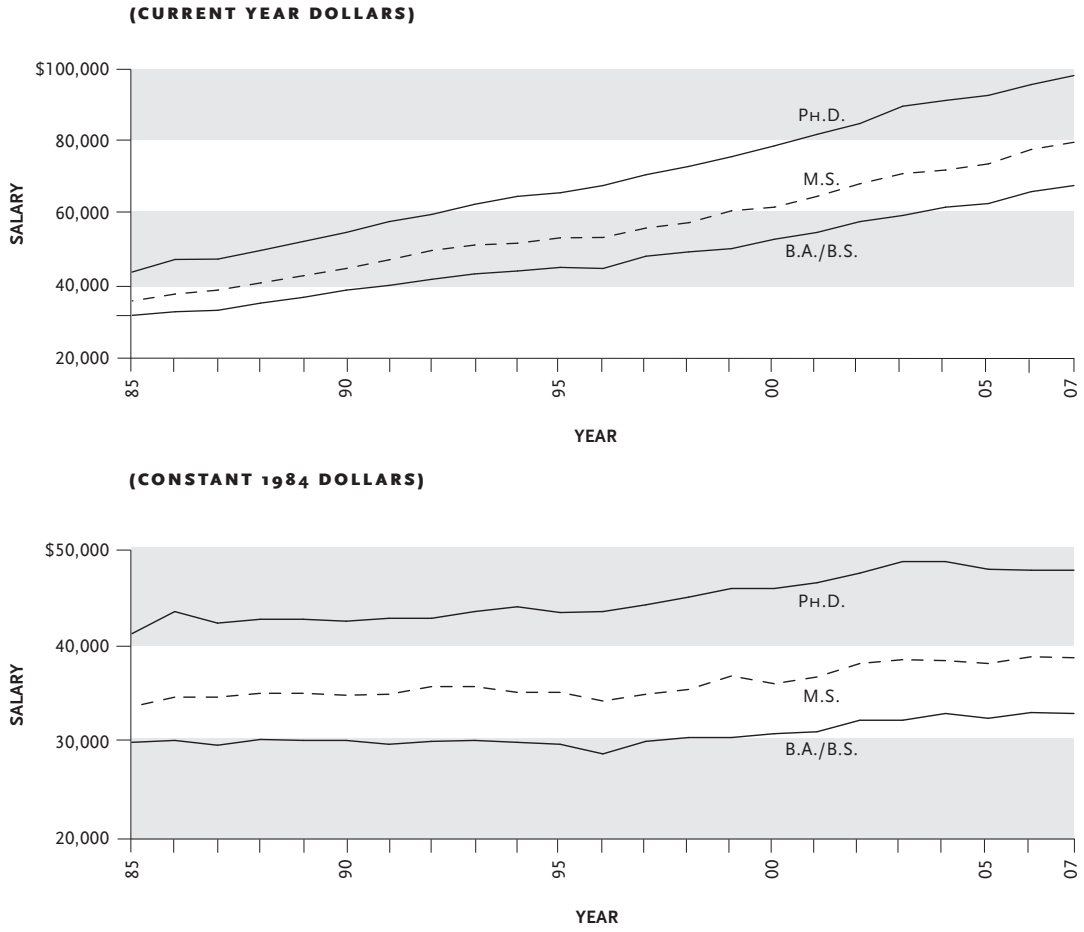
Tables 1, 2, and 3 offer an overview of salaries by degree level and employment sector. While these may be the most influential correlates of salary, a variety of other factors should also be considered.

TABLE 3. CHANGE IN PH.D. ACADEMIC CHEMISTS' SALARIES, 2006–2007

Rank/ Contract	Median Salary 2007 (2006)	% Change from 2006 In Current Dollars	% Change from 2006 In Constant Dollars (2.8% rate of inflation)
FULL 9/10	$89,000 (86,460)	UP 2.9	UP 0.1
FULL 11/12	$119,200 (124,477)	DOWN 4.2	DOWN 7.0
ASSOC 9/10	$65,000 (60,000)	UP 8.3	UP 5.5
ASSOC 11/12	$76,800 (82,000)	DOWN 6.3	DOWN 9.1
ASST 9/10	$53,000 (52,045)	UP 1.8	DOWN 1.0
ASST 11/12	$65,000 (63,000)	UP 3.2	UP 6.0

As Figure 1 shows, years of experience is particularly important. The tables in the appendix of this report 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 the Appendix). The appendix tables also compare salaries by the type of work performed. For instance, Table 2.3.1 shows that private sector chemists with master's degrees who worked as managers earned substantially more ($104,664 median) when compared to those performing analytical services ($80,000). Similar tables are available for other degree levels and employment sectors. These detailed data can be useful in evaluating one's current salary.

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



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. For the past six to eight years, salaries have tended to beat inflation; now they appear to be stabilizing. This graph also shows that as time passes, salaries are not becoming particularly divergent according to levels of education. The salaries of master's recipients follow a very similar pattern to that of bachelor's.

Non-Salary Income

CONSULTING

Salary data do not provide a complete picture of the earning potential of chemists. A significant number of employers provide employees with 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 2006.

Overall, 10.1% of chemists surveyed reported earning some income from consulting in 2006; this figure has risen since 2005, when only 8% of chemists did consulting. This freelance work contributed a median value of $8,430 to a worker's income. These additional funds may be particularly important to academics, many of whom do not receive paychecks during the summer. It is interesting to note that while more chemists are consulting, they are receiving less money than their 2005 counterparts (a median of $9,000). Over one in five (20.3%) college and university employees reported doing some consulting in 2006. The academic consultants charged a median of $125 an hour and earned $5,000 last year. While academia is the profession in which 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 2006 typically earned $8,100 doing so. Non-manufacturing private sector chemists earned a median of $50,000.

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 hourly rate of $100, while Ph.D.s charged $125; surprisingly, master's recipients charged a median of only $80. Ph.D.s were most likely to do consulting: 12.2% reported additional income in 2006. Age also appears to be correlated with hourly rate. The 2.1% of chemists in their twenties only charged about $50 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 from Consulting
All chemists	10.1	$110	$8,430
Degree			
B.S.	5.6	$100	$15,000
M.S.	7.1	$80	$6,250
Ph.D.	12.2	$125	$7,960
Employer			
Industry–mfg.	3.7	$100	$8,100
Industry–non mfg.	10.2	$125	$50,000
Government	4.8	$75	$5,750
College or univ.	20.3	$125	$5,000
Sex			
Men	11.2	$125	$10,000
Women	6.8	$92	$4,250
Age			
20–29	2.1	$50	$10,000
30–39	5.4	$100	$5,000
40–49	8.3	$100	$9,625
50–59	13.1	$120	$7,000
60–69	18.3	$150	$13,300

Note: 2007 survey respondents were asked to report on income they received from consulting during 2006.

BONUSES Not all employers offer employee bonuses every year or to every employee. Last year, just over half of chemists reported that they were eligible to receive a bonus. Of those eligible, 84.0% received a bonus with a median value of $8,000. 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. Among those who earned a bonus, the typical amount for chemists with a bachelor's degree was $5,000. Typically, master's recipients earned $6,170, and Ph.D.s earned $10,000. While the amount of the bonus was higher for doctorates compared to other degree levels, fewer were eligible to receive a bonus (46.1% of Ph.D.s compared to 55.8% of master's and 59.9% 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 (10.9%) and receive (47.4%) a bonus. Ph.D.s are overwhelmingly represented in academia.

TABLE 5. BONUSES RECEIVED IN 2006

	% Eligible	% of Eligible Received	Median Bonus
All Chemists	50.4	84.0	$8,000
Degree			
B.S.	59.9	87.2	$5,000
M.S.	55.8	84.2	$6,170
Ph.D.	46.1	82.8	$10,000
Employer			
Industry–mfg.	75.5	91.5	$10,000
Industry–non mfg.	60.8	83.1	$5,000
Government	37.7	67.9	$1,930
College or univ.	10.9	47.4	$3,550
Sex			
Men	51.3	83.2	$10,000
Women	47.4	86.7	$5,000
Age			
20–29	46.5	86.6	$3,000
30–39	48.7	87.7	$5,400
40–49	57.3	87.2	$10,000
50–59	52.8	83.1	$11,620
60–69	35.2	69.5	$10,000

Note: 2007 survey respondents were asked to report on bonuses they received in 2006.

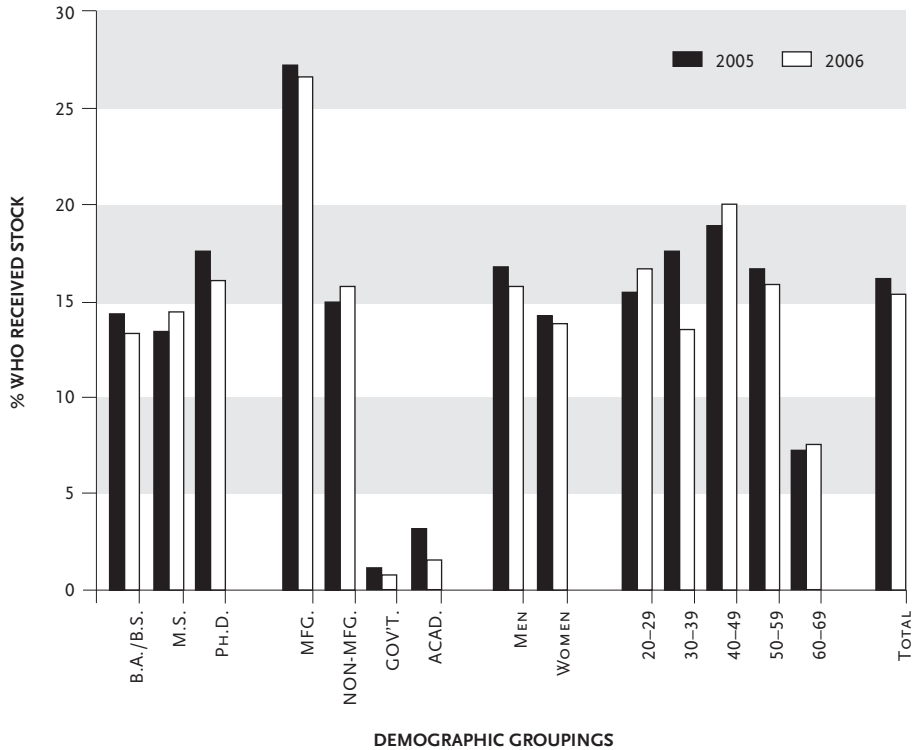
Bonuses for chemists are also less common in government. Only 37.7% of government employees said that they could receive a bonus in 2006. Of those who did receive a bonus, its typical value was only about $1,930. In general, bonuses are utilized most often in the private sector, where employers must be competitive. Non-manufacturing industries awarded a median of $5,000 in bonuses to their chemists. Manufacturing companies were even more generous. Almost 76% of chemists in this field were eligible for a bonus, and nearly all of these individuals (91.5%) received one. The typical amount of the bonus was $10,000. 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 up to the age of 50, the bonus amount tends to increase approximately $3,000. Those aged 20–29 typically earned a bonus of $3,000. Chemists in their fifties reported bonuses around $11,620. After age 59, fewer chemists are eligible for bonuses (35.2%) and the amount of the bonus typically awarded drops.

The median bonus awarded to female chemists was half the value ($5,000) of that provided to male chemists ($10,000). 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 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; by 2003, the figure had dropped to 16.5%, and by 2005, it had fallen to 15.2%. In 2006, however, 15.3% reported receiving stock, indicating that perhaps the decline has stabilized. Figure 3 shows the proportion of chemists who received stock options in 2006 and 2007 by a variety of characteristics. In general, stock offerings decreased for the majority of the workforce. Ph.D.s were more likely than other degree levels to receive stock as part of their overall compensation (16.0% compared to 13.3% for bachelor's and 14.4% for master's). As might be expected, almost all of those receiving stock worked for private companies. However, a small proportion of government (0.6%) and academic (1.5%) employees received this benefit. Within the private sector, stock options were most prevalent in manufacturing, where over a quarter (26.4%) of chemists received them.

FIGURE 3. RECEIPT OF STOCK AS PART OF PROFESSIONAL INCOME FOR CHEMISTS: 2006 & 2007



Note: 2007 survey respondents were asked to report on stock they received in 2006.

Employment and Unemployment

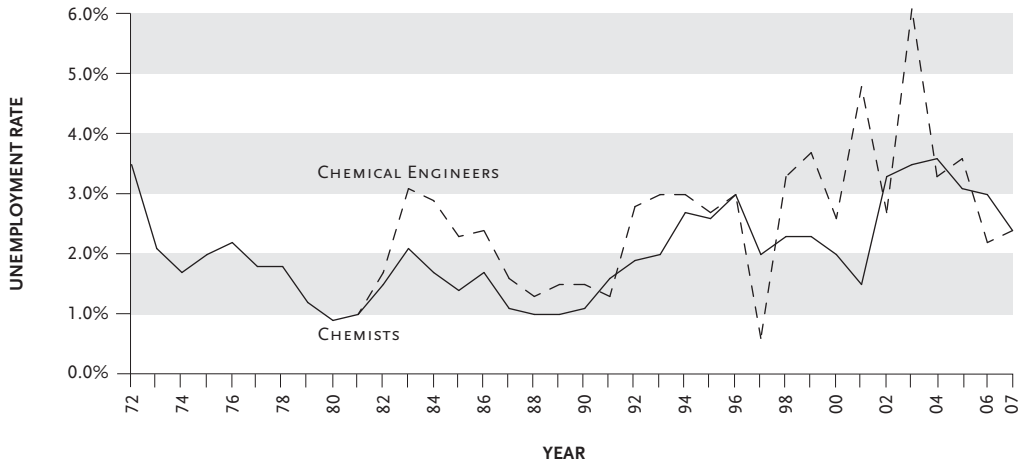
EMPLOYMENT STATUS

In 2007 87.4% of chemists surveyed were employed in full-time positions. This is an improvement over the past couple of years, but is 3.1% lower than the proportion working full time a decade ago (90.5% in 1997). This drop can be partially explained by the slight increase in unemployment over the past decade, and the 1.3% rise in the part-time workers over the same period. This year 3.4% worked fewer than 35 hours a week, while in 1997 only 2.1% did. In 2007 the proportion of chemists employed in temporary postdoctorate positions was 1.6%, similar to the past few years. Around 4.0% 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. The unemployment rate among chemists dropped from 3% in 2006 to 2.4% in 2007. However, within the most recent five years, we saw unemployment peak at 3.6% in 2004. In 2007 the unemployment rate of chemists matched that of chemical engineers.

FIGURE 4. UNEMPLOYMENT RATES FOR CHEMISTS AND CHEMICAL ENGINEERS, 1972–2007



Historically speaking, the employment rates of chemists and chemical engineers have roughly paralleled one another. The wider disparity seen between 1997 and 2003 seems to have corrected itself. Between 2005 and 2006, unemployment among chemical engineers was falling faster than chemists, but in the following year, the situation reversed.

The chemical engineering unemployment rate has been somewhat inconsistent over the past few years: very high in 2003 (6.1%), 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 2007 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 2007 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 21,000 members during the spring of 2007. Ultimately, 7,173 usable responses were received, for a 34.1% 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 a Ph.D. 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, 2007. 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 those between men and women based on their degrees. 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, as well as sample size.

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	—
	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	—

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

Table 1.1.1
SALARIES of BS CHEMISTS employed FULL-TIME
by EMPLOYER TYPE and YEARS SINCE BS
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Industry_Mfg	Total	683	77,249	40,177	55,500	72,000	90,000
	0-1	20	47,218	17,246	39,000	45,000	53,000
	2-4	55	48,113	12,204	37,000	48,230	55,800
	5-9	91	63,029	65,158	47,000	55,000	65,000
	10-14	90	67,413	15,232	56,000	63,468	78,000
	15-19	82	74,028	16,749	60,800	73,000	85,000
	20-24	90	84,754	31,167	61,000	80,500	101,000
	25-29	77	93,243	32,357	73,608	90,000	101,253
	30-34	96	93,779	34,714	73,000	88,507	106,000
	35-39	61	88,168	26,478	72,000	82,000	103,000
	40 or more	21	100,418	94,050	63,345	80,000	100,000
Industry_Non-MFG	Total	144	70,275	59,173	42,000	62,400	80,000
	2-4	22	40,796	14,514	32,500	35,500	42,937
	5-9	22	50,646	16,850	40,000	47,000	62,400
	10-14	16	67,628	21,401	42,500	67,000	75,000
	15-19	14	69,278	11,020	59,000	70,720	75,000
	20-24	22	66,369	20,841	55,000	60,681	73,000
	25-29	15	122,904	155,560	60,000	82,000	100,000
	30-34	16	97,413	47,753	68,600	84,000	100,000
Government	Total	97	71,396	25,157	52,000	65,400	85,286
	30-34	18	87,944	25,182	63,000	88,000	100,000
High School	Total	19	48,230	11,498	42,500	50,000	51,600
College or	Total	40	69,292	104,640	36,000	43,680	63,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Industry_Mfg	Total	523	91,444	32,722	70,500	88,771	105,000
	5-9	45	72,243	59,428	54,000	61,000	72,000
	10-14	67	76,846	16,876	67,000	75,000	84,000
	15-19	68	84,046	27,821	67,500	80,000	96,000
	20-24	64	96,884	26,598	78,000	92,500	104,000
	25-29	104	96,044	27,477	78,000	92,000	110,000
	30-34	85	100,911	26,423	89,000	99,000	114,000
	35-39	53	103,810	32,529	76,140	103,000	118,000
	40 or more	31	100,499	32,384	70,000	97,300	110,000
Industry_Non-MFG	Total	100	85,670	34,980	60,000	80,000	102,800
	5-9	15	65,689	20,848	51,000	62,400	67,000
	30-34	25	102,537	52,323	53,000	102,800	130,000
Government	Total	93	77,013	26,404	55,000	76,344	95,394
	25-29	22	82,934	21,296	63,814	82,000	102,000
	35-39	16	76,624	33,216	48,400	84,000	95,394
High School	Total	58	58,082	19,846	44,981	53,000	70,069
College or University	Total	103	61,615	44,934	44,525	53,000	68,000
	25-29	20	56,926	13,414	46,000	52,624	70,000
	40 or more	18	65,311	27,753	41,000	50,000	93,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Industry_Mfg	Total	1501	118,398	40,018	94,500	110,000	134,815
	5-9	50	87,156	30,100	76,500	82,400	92,000
	10-14	155	93,494	17,586	82,000	91,000	102,200
	15-19	201	104,549	24,035	90,000	101,733	117,000
	20-24	265	117,769	30,931	98,500	111,333	132,000
	25-29	293	122,477	35,654	100,000	115,000	141,500
	30-34	266	134,079	47,168	108,100	126,000	150,000
	35-39	176	128,895	47,046	102,000	122,000	149,000
	40 or more	94	131,223	57,084	104,000	125,753	150,000
Industry_Non-MFG	Total	363	113,790	46,975	84,240	104,000	130,000
	5-9	19	69,742	13,948	62,000	70,000	78,500
	10-14	52	88,277	29,390	75,100	85,000	99,000
	15-19	68	108,466	44,977	87,000	100,000	118,500
	20-24	67	117,733	43,206	92,000	112,458	139,000
	25-29	47	129,811	44,919	100,400	123,000	150,000
	30-34	42	133,543	60,841	96,000	115,000	165,000
	35-39	30	118,406	42,723	90,750	109,512	134,000
	40 or more	37	128,229	48,445	86,382	121,500	150,000
Government	Total	277	104,925	29,598	85,000	104,743	121,967
	5-9	10	69,012	14,925	57,170	65,247	75,500
	10-14	33	80,017	20,812	64,000	84,000	98,000
	15-19	30	90,120	22,527	83,827	89,985	101,500
	20-24	40	109,746	24,468	91,000	109,452	120,719
	25-29	33	111,947	26,373	97,000	105,370	120,000
	30-34	48	120,948	27,930	105,471	117,624	139,793
	35-39	38	113,038	28,863	104,600	118,000	131,978
	40 or more	45	107,668	30,322	88,000	107,000	123,000
Self-Employer	Total	23	118,268	69,279	69,000	100,000	162,232
High School	Total	34	58,565	16,454	51,000	60,000	69,000
College or University	Total	1275	83,341	44,937	55,000	72,978	97,000
	5-9	57	52,670	13,203	44,000	50,000	60,000
	10-14	183	61,137	20,662	48,000	57,000	69,500
	15-19	169	65,514	23,467	52,000	60,000	73,000
	20-24	166	75,059	52,022	53,000	67,729	84,772
	25-29	164	85,756	48,085	59,825	78,156	101,000
	30-34	166	97,554	52,730	62,485	85,000	110,470
	35-39	136	93,848	40,639	67,320	84,000	109,000
	40 or more	234	109,048	45,125	77,000	99,950	132,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BA or BS	Total	683	77,249	40,177	55,500	72,000	90,000
	0-1	20	47,218	17,246	39,000	45,000	53,000
	2-4	55	48,113	12,204	37,000	48,230	55,800
	5-9	91	63,029	65,158	47,000	55,000	65,000
	10-14	90	67,413	15,232	56,000	63,468	78,000
	15-19	82	74,028	16,749	60,800	73,000	85,000
	20-24	90	84,754	31,167	61,000	80,500	101,000
	25-29	77	93,243	32,357	73,608	90,000	101,253
	30-34	96	93,779	34,714	73,000	88,507	106,000
	35-39	61	88,168	26,478	72,000	82,000	103,000
	40 or more	21	100,418	94,050	63,345	80,000	100,000
MS	Total	523	91,444	32,722	70,500	88,771	105,000
	5-9	45	72,243	59,428	54,000	61,000	72,000
	10-14	67	76,846	16,876	67,000	75,000	84,000
	15-19	68	84,046	27,821	67,500	80,000	96,000
	20-24	64	96,884	26,598	78,000	92,500	104,000
	25-29	104	96,044	27,477	78,000	92,000	110,000
	30-34	85	100,911	26,423	89,000	99,000	114,000
	35-39	53	103,810	32,529	76,140	103,000	118,000
	40 or more	31	100,499	32,384	70,000	97,300	110,000
PHD	Total	1501	118,398	40,018	94,500	110,000	134,815
	5-9	50	87,156	30,100	76,500	82,400	92,000
	10-14	155	93,494	17,586	82,000	91,000	102,200
	15-19	201	104,549	24,035	90,000	101,733	117,000
	20-24	265	117,769	30,931	98,500	111,333	132,000
	25-29	293	122,477	35,654	100,000	115,000	141,500
	30-34	266	134,079	47,168	108,100	126,000	150,000
	35-39	176	128,895	47,046	102,000	122,000	149,000
	40 or more	94	131,223	57,084	104,000	125,753	150,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BA or BS	Total	470	80,953	35,699	57,500	76,206	95,000
	2-4	30	48,321	11,316	39,267	48,230	56,160
	5-9	43	56,919	13,791	47,000	54,000	65,400
	10-14	54	67,865	15,670	56,000	63,468	79,000
	15-19	53	75,688	16,267	62,000	76,000	85,848
	20-24	69	85,183	30,256	61,000	86,400	103,500
	25-29	64	97,719	33,222	82,500	93,065	104,000
	30-34	77	92,897	35,201	72,000	88,526	106,500
	35-39	56	89,883	26,604	72,000	82,845	106,400
	40 or more	17	104,883	104,020	63,345	80,000	100,000
MS	Total	361	94,450	28,974	74,700	91,700	107,900
	5-9	25	64,766	12,919	58,900	63,500	71,000
	10-14	42	80,480	18,250	69,900	77,506	88,000
	15-19	40	87,162	31,113	69,000	82,000	100,400
	20-24	43	99,739	28,149	78,600	95,000	105,000
	25-29	74	100,265	26,807	80,808	95,000	111,000
	30-34	63	99,237	24,932	90,000	98,000	112,000
	35-39	47	104,554	32,440	80,000	104,664	116,000
	40 or more	26	103,243	33,466	75,190	98,635	110,000
PHD	Total	1262	120,312	41,068	95,500	113,000	136,000
	5-9	36	89,316	34,666	78,000	82,500	90,000
	10-14	113	93,357	17,258	80,878	91,000	102,000
	15-19	158	105,528	24,810	90,000	103,000	116,500
	20-24	217	120,141	31,415	99,700	115,824	134,330
	25-29	251	122,252	35,791	100,320	115,000	140,000
	30-34	235	135,476	48,003	110,000	127,500	150,000
	35-39	161	128,872	47,208	102,000	122,000	148,000
	40 or more	90	133,132	57,123	105,534	128,000	154,500

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BA or BS	Total	212	69,071	47,819	52,000	62,000	76,000
	2-4	25	47,863	13,428	34,300	47,600	53,300
	5-9	48	68,503	88,854	46,900	56,000	65,000
	10-14	36	66,734	14,744	54,900	63,000	77,865
	15-19	29	70,993	17,474	58,000	70,000	79,500
	20-24	21	83,341	34,750	61,000	73,000	88,700
	30-34	19	97,354	33,340	73,465	87,000	104,000
MS	Total	161	84,898	39,176	63,999	80,000	97,000
	5-9	19	82,727	90,601	49,000	57,500	75,000
	10-14	25	70,741	12,340	61,410	71,215	79,500
	15-19	28	79,595	22,079	66,000	77,660	89,100
	20-24	21	91,036	22,605	68,800	90,000	98,600
	25-29	30	85,632	26,740	66,666	85,000	109,000
	30-34	22	105,704	30,411	89,000	108,000	130,500
PHD	Total	234	108,356	32,181	87,200	102,200	123,000
	10-14	42	93,862	18,652	83,000	90,500	103,839
	15-19	43	100,949	20,810	85,728	100,100	117,000
	20-24	47	107,515	26,448	92,500	103,000	120,000
	25-29	41	123,102	35,346	96,000	114,400	141,500
	30-34	30	124,325	39,744	103,500	115,695	136,333

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Ag/Food chemistry	Total	30	79,754	31,303	59,800	68,000	98,000
Analytical chemistry	Total	247	67,279	22,319	51,126	64,000	80,000
	2-4	22	45,395	13,288	34,300	41,000	52,000
	5-9	39	53,622	10,240	47,000	52,500	58,304
	10-14	39	63,973	13,416	55,125	60,500	75,000
	15-19	31	73,350	17,962	60,000	71,297	78,400
	20-24	32	66,654	23,468	51,126	61,000	78,000
	25-29	25	79,554	17,911	60,600	80,900	94,000
	30-34	30	79,684	25,229	69,351	80,000	93,500
	35-39	16	93,509	24,344	75,000	91,666	110,000
Biotechnology	Total	22	72,604	20,403	60,700	66,000	85,100
Environmental chemistry	Total	56	71,700	32,407	50,000	67,000	82,000
General chemistry	Total	32	86,874	37,298	56,500	80,000	101,000
Inorganic chemistry	Total	15	68,886	52,511	50,000	56,000	63,983
Materials science	Total	29	87,644	44,846	57,720	71,000	101,000
Medicinal-Pharmaceutical	Total	92	81,208	68,709	55,000	68,000	89,100
	5-9	23	61,141	13,374	54,000	60,200	67,700
Organic chemistry	Total	71	77,726	26,371	58,000	75,182	88,000
	30-34	15	87,264	21,907	74,000	88,507	94,400
Physical chemistry	Total	10	69,581	16,707	53,300	69,000	80,000
Polymer chemistry	Total	98	83,014	51,270	56,268	78,000	100,000
	20-24	16	91,040	22,418	64,800	95,000	106,000
Other chemical science	Total	29	64,980	19,766	56,000	63,000	74,200
Business Administration	Total	16	98,719	44,158	70,000	96,000	113,000
Other nonchemistry	Total	49	87,297	90,985	53,000	73,000	93,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Analytical services	Total	187	63,527	27,268	46,900	58,000	73,923
	2-4	25	45,620	12,627	35,000	44,675	49,000
	5-9	28	49,510	12,334	40,000	49,348	55,000
	10-14	25	63,865	10,315	56,000	62,338	70,000
	15-19	20	62,642	10,471	54,000	62,000	71,006
	20-24	26	62,116	15,966	55,120	60,681	72,000
	25-29	18	80,799	31,657	60,000	80,000	100,191
	30-34	22	86,704	51,353	55,000	73,000	94,000
Consulting	Total	16	69,334	24,347	42,937	70,000	81,000
General mgmt	Total	55	104,828	69,794	67,851	84,500	119,000
Health & Safety	Total	25	80,107	26,594	53,000	82,000	104,000
Marketing,sales	Total	51	95,923	85,299	71,000	85,000	100,000
Production, QC	Total	144	67,300	23,779	51,500	61,728	80,000
	2-4	16	44,340	17,682	31,220	35,000	53,300
	5-9	17	51,849	12,073	37,800	51,500	58,304
	10-14	25	61,221	15,332	50,000	59,000	66,000
	15-19	17	68,331	15,752	55,500	67,000	76,500
	20-24	19	76,105	22,882	60,000	70,000	84,600
	25-29	16	79,945	29,330	57,720	74,000	94,000
	30-34	18	78,996	23,316	62,000	79,000	94,000
Applied Research	Total	178	75,871	25,378	56,000	72,000	88,700
	2-4	16	50,352	8,378	45,000	52,000	55,800
	5-9	34	62,848	14,787	52,600	60,000	73,000
	10-14	19	67,857	12,713	54,900	67,600	78,000
	15-19	22	73,289	14,775	60,000	74,000	85,100
	20-24	24	94,124	25,665	80,500	94,000	106,000
	30-34	23	94,794	30,398	71,000	88,526	106,900
	35-39	17	81,774	32,007	52,000	77,000	88,372
Basic Research	Total	41	61,605	19,793	44,400	63,000	70,700
R&D mgmt	Total	47	97,877	31,692	76,000	98,000	113,000
Other function	Total	45	76,705	33,882	53,500	77,865	89,500

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Aerospace	Total	17	85,937	31,977	54,600	77,000	110,000
Basic chemicals	Total	23	77,989	29,209	56,000	73,000	90,000
Coatings, inks,	Total	43	74,412	31,209	51,000	67,500	85,000
Food	Total	39	74,823	30,084	54,780	70,000	88,000
Instruments	Total	15	78,793	36,259	51,000	80,000	95,000
Medical devices	Total	35	84,562	80,706	52,500	70,000	79,000
Metals	Total	19	73,896	46,165	52,400	62,400	75,500
Personal Care	Total	17	74,093	35,599	52,000	62,580	75,500
Petroleum	Total	25	81,187	28,200	58,223	86,400	97,227
Pharmaceuticals	Total	190	75,271	25,239	57,000	72,000	89,100
	2-4	24	50,546	12,712	35,000	52,000	57,000
	5-9	34	62,014	11,346	54,000	60,200	68,000
	10-14	24	73,746	19,561	57,500	75,000	81,000
	15-19	28	81,279	16,486	72,000	79,000	91,000
	20-24	25	93,213	32,467	70,600	93,257	109,000
	25-29	18	85,166	24,029	65,250	89,100	100,000
	30-34	19	95,575	27,924	74,000	94,000	122,000
Plastics	Total	23	80,800	24,299	56,400	86,000	93,000
Rubber	Total	16	76,118	16,230	65,000	72,000	85,000
Specialty chems	Total	66	74,893	26,090	58,160	68,800	88,507
	10-14	16	64,678	11,077	53,900	61,728	70,000
Other manufacturing	Total	98	77,952	65,574	51,300	65,520	90,000
	20-24	16	72,643	22,603	51,684	73,000	95,000
Analytical serv	Total	43	57,700	27,810	37,000	57,000	69,000
Biotech research	Total	16	77,228	20,679	62,291	75,000	85,100
Profl services	Total	24	94,365	127,431	41,600	62,400	90,000
Other nonmanuf	Total	24	69,096	26,328	45,000	70,000	88,400

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific	Total	102	85,166	53,213	60,000	75,500	91,350
	5-9	15	69,193	12,872	62,400	68,000	75,500
	20-24	18	86,426	38,812	61,000	73,000	103,500
Mountain	Total	42	74,333	37,011	56,000	62,711	82,000
West	Total	69	66,973	23,671	51,000	60,000	76,500
West	Total	45	76,781	23,659	58,850	77,000	94,000
East	Total	196	75,745	52,392	51,000	67,600	90,000
North Central	2-4	18	37,230	7,096	32,240	34,000	39,585
	5-9	32	52,587	16,895	43,000	51,000	56,000
	10-14	22	61,496	14,479	52,000	58,000	73,546
	15-19	25	70,789	15,523	57,300	69,900	80,016
	20-24	28	82,501	31,065	57,899	75,000	103,500
	25-29	24	118,515	120,324	73,000	90,300	119,000
	30-34	29	97,260	35,302	80,256	93,000	104,000
East	Total	25	89,162	121,900	44,675	63,468	88,000
Middle Atlantic	Total	173	72,828	24,521	55,000	70,000	88,400
	2-4	21	46,764	12,199	35,000	47,600	55,000
	10-14	22	69,649	15,968	59,998	66,000	79,400
	15-19	20	74,494	18,137	58,700	71,000	80,000
	20-24	23	82,896	27,449	61,000	85,000	93,257
	25-29	17	85,566	15,036	68,000	91,300	94,000
	30-34	26	84,723	27,219	69,000	79,700	100,200
	35-39	18	80,111	26,646	65,000	77,000	91,666
South Atlantic	Total	115	75,998	33,522	51,684	72,000	95,664
	20-24	16	83,212	35,489	56,700	74,000	97,000
	30-34	21	92,190	41,672	64,000	80,400	106,500
New	Total	53	78,034	32,610	58,000	75,000	87,000

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

Table 2.2.5
SALARIES of BS CHEMISTS employed FULL-TIME in INDUSTRY
by TOTAL SUBORDINATES and YEARS SINCE BS
2007 ACS Salary Survey

			Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
T	None	Total	439	66,310	36,623	50,000	60,000	79,700
		0-1	19	42,864	11,238	34,000	45,000	53,000
		2-4	64	45,496	12,724	34,500	42,937	52,000
		5-9	86	62,372	66,982	46,000	54,200	65,000
		10-14	60	66,038	16,161	54,400	62,300	79,400
		15-19	41	68,172	14,762	55,000	70,000	78,000
		20-24	47	71,164	24,719	52,400	65,000	88,000
		25-29	35	82,135	26,181	60,000	82,200	95,664
		30-34	49	82,387	22,619	64,000	80,400	94,400
		35-39	29	79,998	27,441	64,000	80,000	90,000
	1-2	Total	124	78,139	58,720	57,500	72,000	89,000
		5-9	16	50,687	16,565	36,400	46,000	60,000
		15-19	23	73,941	15,137	60,800	71,000	79,000
		20-24	23	83,197	21,983	66,000	86,000	97,500
		25-29	16	121,318	147,026	65,763	88,000	103,000
	3-9	Total	48	77,963	24,261	57,899	80,000	93,000
	10-14	Total	22	82,316	23,850	72,000	80,256	93,280
	15-29	Total	29	74,334	22,530	61,000	73,400	79,440
	30-49	Total	20	105,507	95,509	70,000	74,000	103,500
	50 or more	Total	145	98,360	40,468	71,297	90,000	115,000
		10-14	20	72,592	19,177	59,999	67,000	77,000
		15-19	17	80,165	16,395	62,000	80,000	91,000
		20-24	23	107,314	37,768	78,000	98,000	126,125
		25-29	24	111,266	48,237	83,000	94,000	119,000
		30-34	27	119,902	50,112	85,000	104,000	135,000
		35-39	20	105,534	24,548	82,845	103,000	121,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Less than 50	Total	63	63,067	25,248	40,500	62,400	80,000
50 to	Total	38	75,746	37,432	52,000	63,150	87,500
100 to 499	Total	102	84,590	79,948	53,500	70,000	90,000
	5-9	18	86,110	144,923	43,000	54,780	60,000
	10-14	15	68,990	17,974	54,000	70,000	75,000
	30-34	15	92,955	54,038	63,000	80,256	106,500
500 to 2,499	Total	104	79,138	67,156	51,500	67,000	88,000
	5-9	20	55,691	11,023	50,000	52,500	56,000
	15-19	15	69,023	13,620	55,000	72,000	78,000
2,500 to 9,999	Total	125	70,251	23,628	54,300	67,851	84,500
	10-14	22	65,187	11,904	56,760	60,000	75,000
	25-29	21	82,618	20,556	65,250	83,000	93,800
	30-34	19	86,211	30,732	64,000	85,000	93,000
10,000 to 24,999	Total	84	73,334	26,423	55,000	70,700	88,000
	2-4	15	50,718	16,368	35,000	50,000	56,160
	15-19	15	72,318	14,403	57,300	70,220	82,000
25,000 or more	Total	184	81,883	27,131	60,700	79,000	98,000
	5-9	29	64,261	12,727	55,000	64,400	72,000
	10-14	33	74,494	17,001	60,500	75,000	82,379
	15-19	16	86,400	15,158	73,000	80,016	93,500
	20-24	27	90,708	26,698	66,000	93,257	110,000
	25-29	28	101,300	30,048	88,000	97,684	104,900
	30-34	18	97,973	25,052	79,700	90,000	117,672

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
2008 ACS Salary Survey

SPECIALTY			Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
	Ag/Food chemistry	Total	20	85,206	27,304	67,500	78,500	97,500
	Analytical chemistry	Total	166	82,130	25,920	65,000	80,000	96,700
		5-9	17	62,275	12,666	49,400	62,400	65,000
		10-14	19	68,879	13,338	60,000	69,000	76,000
		15-19	22	78,368	24,438	66,000	77,660	92,000
		20-24	15	89,691	22,736	68,800	88,895	95,000
		25-29	32	81,539	21,692	72,160	80,000	90,000
		30-34	37	90,060	28,644	66,100	94,000	103,000
		35-39	16	103,074	29,466	85,000	90,000	107,600
	Biotechnology	Total	21	106,990	49,873	68,000	99,000	122,000
	Environmental chemistry	Total	40	99,808	34,840	73,000	93,000	120,000
	General chemistry	Total	18	86,570	23,533	70,000	84,000	104,286
	Materials science	Total	30	98,218	29,224	77,000	96,000	115,755
	Medicinal-Pharmaceutical	Total	104	91,100	28,943	72,500	86,500	102,000
		5-9	15	70,160	16,223	59,900	67,500	76,000
		10-14	22	78,932	9,312	73,000	78,910	86,500
		15-19	22	93,477	33,942	72,500	82,000	102,000
		20-24	16	98,817	24,910	89,500	95,964	103,000
	Organic chemistry	Total	64	89,962	24,589	72,000	87,307	103,000
	Physical chemistry	Total	15	93,869	22,352	72,000	99,500	113,000
	Polymer chemistry	Total	58	96,812	54,562	70,000	93,000	108,210
		25-29	15	96,030	30,501	78,000	93,000	103,000
	Other chemical science	Total	19	82,080	31,950	57,500	75,000	86,000
	Other nonchemistry	Total	25	88,935	32,694	61,600	85,000	104,000

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
2008 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Analytical services	Total	108	80,319	21,305	65,000	80,000	93,000
	25-29	25	80,867	14,199	72,160	80,000	88,771
	30-34	30	87,436	28,735	63,999	91,400	100,800
General mgmt	Total	39	104,161	36,156	88,000	104,664	126,000
Health & Safety	Total	37	100,300	33,761	75,000	95,964	117,000
Marketing,sales	Total	38	98,658	35,175	80,000	93,000	116,000
Production, QC	Total	74	90,981	37,947	68,000	82,500	105,200
Applied Research	Total	194	86,563	35,057	67,500	80,808	100,000
	5-9	28	74,890	74,063	51,000	60,000	67,500
	10-14	32	74,645	10,839	67,000	75,000	80,200
	15-19	28	80,772	18,373	68,219	75,000	92,400
	20-24	20	87,998	17,527	74,000	86,000	101,000
	25-29	30	96,202	23,202	80,000	97,500	110,000
	30-34	25	102,267	24,033	90,563	103,000	115,000
	35-39	17	104,008	25,324	76,140	107,500	114,000
Basic Research	Total	44	79,824	16,273	68,774	78,500	90,000
R&D mgmt	Total	37	116,797	36,743	90,000	109,000	127,000
Other function	Total	28	93,597	28,956	73,000	94,000	110,000

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
2008 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Ag chemicals	Total	16	83,168	32,102	67,500	74,700	98,900
Basic chemicals	Total	20	97,147	30,566	75,000	90,000	112,000
Coatings, inks,	Total	27	90,880	23,836	79,500	91,000	107,500
Electronics/semi	Total	17	100,457	35,563	61,755	114,000	126,000
Food	Total	20	80,671	20,992	65,400	75,000	90,000
Medical devices	Total	20	91,666	28,184	66,666	85,654	99,000
Petroleum	Total	15	111,908	28,872	92,000	103,000	129,000
Pharmaceuticals	Total	199	92,160	29,533	71,000	89,000	103,000
	5-9	22	66,514	16,275	58,900	63,000	71,000
	10-14	33	77,545	14,757	68,000	77,000	86,500
	15-19	39	90,263	30,638	70,000	82,000	99,500
	20-24	28	101,371	25,426	88,000	95,964	104,000
	25-29	35	98,586	24,489	80,000	96,820	106,000
	30-34	16	110,068	21,643	96,700	104,000	121,000
	35-39	17	108,256	44,623	68,774	103,000	128,000
Plastics	Total	23	104,996	77,637	75,000	96,000	98,000
Specialty chems	Total	49	89,593	34,230	60,000	85,000	110,000
Other	Total	46	86,224	20,813	68,800	86,000	104,000
Analytical serv	Total	16	73,439	29,797	53,000	63,000	81,000
Biotech research	Total	17	91,765	49,641	62,400	78,910	88,000
Profl services	Total	18	103,494	29,058	82,000	100,000	124,500
Other nonmanuf	Total	17	78,041	29,164	47,000	78,000	100,200

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
2008 ACS Salary Survey

			Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
GEOGRAPHIC REGION	Pacific	Total	67	87,524	26,403	68,774	88,700	99,500
	Mountain	Total	19	81,396	31,584	49,374	82,000	111,000
	West	Total	49	86,690	23,993	68,000	85,000	103,000
	West	Total	27	102,310	32,863	71,100	105,000	122,820
	East	Total	137	87,077	25,752	66,100	85,000	103,000
	North Central	5-9	16	60,234	12,318	52,700	57,000	65,000
		10-14	16	76,093	13,586	60,000	75,000	84,000
		15-19	19	88,380	22,511	71,500	83,600	100,000
		25-29	25	89,269	29,901	67,400	85,000	108,000
		30-34	22	94,791	27,066	82,000	95,680	109,000
		35-39	19	102,452	27,727	77,000	107,600	116,000
	East	Total	19	93,580	28,397	75,338	92,500	104,286
	Middle Atlantic	Total	143	94,887	41,294	72,000	88,000	104,000
		10-14	16	79,511	11,595	69,900	78,910	84,720
		15-19	16	88,693	36,715	68,000	77,660	92,400
		20-24	20	102,904	30,546	78,500	97,000	106,700
		25-29	31	94,125	25,205	77,000	90,000	106,000
		30-34	24	105,318	29,255	86,000	102,000	127,000
		35-39	15	96,969	27,892	76,140	89,220	107,500
	South Atlantic	Total	83	88,244	35,270	63,731	84,000	105,000
		30-34	15	101,633	33,814	89,000	107,900	115,000
	New	Total	69	93,826	36,299	73,000	89,000	104,000

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

Table 2.3.5
SALARIES of MS CHEMISTS employed FULL-TIME in INDUSTRY
by TOTAL SUBORDINATES and YEARS SINCE BS
2008 ACS Salary Survey

			Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
T	None	Total	315	81,392	30,643	64,500	77,780	94,000
		5-9	44	69,934	60,172	51,000	60,000	67,500
		10-14	50	74,839	12,388	66,000	75,000	80,400
		15-19	46	77,089	14,925	68,219	76,000	88,000
		20-24	37	84,249	17,656	71,300	86,000	97,000
		25-29	47	88,318	25,141	73,500	86,000	98,260
		30-34	43	92,080	31,683	63,999	95,000	108,000
		35-39	23	90,960	21,388	74,000	89,400	107,600
		40 or more	18	87,151	17,172	70,000	87,307	104,000
	1-2	Total	123	90,199	24,243	72,050	88,000	104,000
		25-29	29	89,155	18,902	78,600	88,771	103,000
		30-34	23	94,079	24,563	87,000	99,000	108,700
		35-39	20	105,142	28,035	80,000	105,000	120,000
	3-9	Total	26	89,335	26,711	73,000	90,000	99,877
	10-14	Total	28	97,570	36,748	68,400	85,000	115,000
	15-29	Total	17	98,198	22,658	84,000	93,000	110,000
	50 or more	Total	101	116,149	38,392	92,000	112,000	138,000
		20-24	16	121,658	29,984	95,000	107,000	148,000
		25-29	20	116,144	35,469	86,000	110,500	142,000
		30-34	24	120,279	37,603	95,680	119,870	129,000

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
2008 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Less than 50	Total	47	81,191	33,872	60,000	75,000	96,400
50 to 99	Total	23	97,490	48,156	70,000	82,500	103,000
100 to 499	Total	68	86,433	29,613	68,400	84,720	98,000
	10-14	16	80,638	17,076	75,000	80,400	88,700
500 to 2,499	Total	71	85,628	31,944	60,000	83,052	103,000
	25-29	19	90,527	32,974	60,000	88,000	103,000
2,500 to 9,999	Total	71	94,654	26,483	78,500	91,400	105,000
	20-24	17	96,793	22,313	78,500	90,000	105,000
10,000 to 24,999	Total	64	94,625	26,697	73,000	93,000	109,000
	25-29	20	96,529	25,345	80,808	89,000	99,000
	30-34	17	109,953	14,865	98,000	108,700	117,000
25,000 or more	Total	185	92,119	28,586	71,000	88,771	107,600
	5-9	16	60,438	10,545	51,000	61,600	65,000
	10-14	24	75,928	11,985	68,000	74,835	84,000
	15-19	30	93,457	29,286	76,000	83,600	102,000
	20-24	31	95,702	26,079	76,500	95,964	103,000
	25-29	30	100,116	26,524	80,000	97,500	115,755
	30-34	27	102,648	25,567	88,000	100,800	118,000
	35-39	22	103,309	29,535	76,000	104,664	125,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Ag/Food chemistry	Total	43	119,575	65,648	90,000	110,913	132,000
Analytical chemistry	Total	261	107,585	33,242	86,500	103,450	125,000
	10-14	32	90,913	20,117	80,000	87,000	95,000
	15-19	35	102,314	24,909	85,000	107,000	118,000
	20-24	44	104,264	35,313	92,000	100,000	117,830
	25-29	57	116,858	31,992	93,000	106,488	143,000
	30-34	39	127,457	30,663	107,000	121,700	142,000
	35-39	23	107,251	39,524	74,600	105,744	134,000
	40 or more	18	110,069	34,816	80,000	107,000	141,600
Biochemistry	Total	52	117,211	35,783	92,000	110,000	134,390
Biotechnology	Total	108	125,985	49,146	99,600	116,000	146,448
	15-19	20	113,552	25,935	100,000	104,000	118,000
	20-24	24	142,486	42,589	102,000	135,000	188,000
	25-29	19	114,576	27,625	100,000	115,000	123,000
	30-34	16	140,443	64,616	109,675	120,000	153,000
Environmental chemistry	Total	52	105,281	35,854	80,000	101,248	127,000
General chemistry	Total	31	121,156	55,579	90,000	114,000	136,500
Inorganic chemistry	Total	64	112,687	30,904	90,000	106,000	130,000
	25-29	15	121,279	20,017	105,000	123,000	131,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Materials science	Total	165	115,309	42,417	89,000	106,050	126,000
	10-14	19	91,393	12,507	82,680	86,300	99,998
	15-19	27	97,330	14,781	85,000	95,600	105,000
	20-24	27	114,287	27,344	95,000	115,000	125,000
	25-29	25	126,401	40,008	95,000	110,368	140,000
	30-34	31	140,217	65,355	109,500	126,000	148,000
	35-39	15	125,256	41,755	103,000	114,758	131,100
Medicinal-Pharmaceutical	Total	341	125,376	39,552	99,500	120,000	145,000
	10-14	54	97,276	21,313	85,000	98,670	106,000
	15-19	73	111,160	22,092	96,500	109,500	125,000
	20-24	67	128,189	27,782	110,000	128,000	144,000
	25-29	52	139,869	42,162	109,000	136,233	160,000
	30-34	43	151,727	48,035	118,976	140,000	170,000
	35-39	21	149,739	50,653	97,500	148,231	184,900
	40 or more	22	138,094	51,066	122,000	131,100	165,000
Organic chemistry	Total	216	110,787	36,282	90,000	105,000	125,950
	10-14	22	85,792	16,650	75,451	88,000	96,000
	15-19	27	98,712	40,259	76,700	94,100	99,000
	20-24	38	108,329	24,674	90,000	105,765	130,000
	25-29	37	115,018	29,223	95,000	110,000	126,634
	30-34	39	124,397	37,844	100,000	116,000	134,815
	35-39	30	119,881	45,166	96,000	115,000	127,000
Physical chemistry	Total	58	117,993	24,130	103,300	113,000	136,500
Polymer chemistry	Total	216	113,813	39,485	90,000	105,000	125,000
	10-14	24	89,589	10,347	80,411	87,000	97,000
	15-19	23	103,352	28,236	90,000	100,000	106,500
	20-24	36	107,151	18,626	91,000	105,000	124,000
	25-29	47	119,044	49,198	94,460	109,000	121,000
	30-34	35	126,635	38,910	99,000	122,000	130,180
	35-39	29	132,080	41,059	102,000	125,000	145,590
Other chemical science	Total	50	114,241	39,536	84,500	109,000	131,300
Business Administration	Total	39	136,895	45,736	105,000	130,000	175,000
Computer science	Total	21	125,211	35,444	100,000	120,000	138,321
Law	Total	35	167,134	64,278	115,000	165,000	185,000
Other nonchemistry	Total	95	116,340	45,770	90,000	110,000	145,000
	25-29	20	127,611	38,424	98,100	114,400	155,000
	30-34	20	125,270	55,154	84,030	113,000	163,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Analytical services	Total	142	99,503	30,408	82,464	99,950	118,284
	10-14	21	86,417	19,057	70,700	90,000	95,000
	20-24	25	94,208	28,329	77,000	93,000	117,830

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Analytical services	25-29	29	108,257	32,021	84,000	106,392	128,000
	30-34	24	108,685	37,891	93,000	101,000	126,000
	35-39	19	104,414	34,046	74,600	106,000	126,700
Chemical info	Total	22	100,252	24,890	83,300	96,000	106,670
Computers	Total	23	112,314	32,970	92,000	110,000	125,000
Consulting	Total	28	124,000	50,583	98,100	106,700	131,000
General mgmt	Total	64	147,251	78,992	100,000	122,287	180,000
	30-34	15	165,267	97,998	119,000	144,248	168,000
Health & Safety	Total	31	123,931	36,974	100,000	124,500	154,500
Marketing,sales	Total	83	107,059	27,373	91,500	104,000	121,000
	20-24	15	98,292	23,955	94,000	100,000	102,330
	25-29	21	108,029	19,917	91,500	104,000	126,600
	30-34	15	121,527	31,690	98,609	115,000	130,695
Patents	Total	37	162,956	58,804	115,000	150,000	180,000
Production, QC	Total	92	108,856	35,687	87,000	102,802	125,794
	20-24	17	116,462	36,410	86,322	109,000	128,000
	25-29	15	115,556	35,640	96,500	102,802	117,000
	30-34	17	129,678	31,329	98,000	125,794	160,000
Applied Research	Total	826	108,426	27,990	90,000	105,000	124,508
	5-9	43	81,261	11,641	75,500	82,000	88,000
	10-14	111	90,607	14,572	80,878	88,000	100,050
	15-19	134	101,500	20,984	89,272	99,992	112,000
	20-24	154	110,906	23,455	93,732	109,584	128,000
	25-29	152	112,319	26,461	98,280	108,277	125,000
	30-34	116	123,751	31,588	104,000	120,000	140,000
	35-39	70	120,795	34,581	101,000	115,000	136,500
	40 or more	45	119,384	33,782	93,000	123,000	131,100
Basic Research	Total	155	111,450	33,186	92,500	105,000	125,950
	10-14	33	86,580	21,233	79,995	92,000	99,000
	15-19	31	99,059	16,139	89,600	100,000	107,000
	20-24	22	119,928	27,701	104,000	120,000	140,000
	25-29	19	123,145	23,069	104,000	120,000	132,280
	30-34	22	132,247	26,059	115,000	120,000	147,000
R&D mgmt	Total	303	147,282	49,467	115,725	140,000	170,000
	10-14	19	114,336	27,271	95,500	110,000	120,000
	15-19	38	120,216	29,976	100,000	118,000	135,000
	20-24	57	141,825	35,069	116,000	134,000	167,000
	25-29	64	161,750	44,220	130,000	155,000	188,000
	30-34	60	161,670	60,934	129,000	150,000	180,000
	35-39	38	154,021	57,527	120,000	142,000	164,000
	40 or more	25	140,869	49,879	105,534	149,108	180,000
Training	Total	5	106,460	34,001	60,000	98,300	125,000
	25-29	1	151,000	---	151,000	151,000	151,000
	35-39	1	98,300	---	98,300	98,300	98,300
	40 or more	3	94,333	32,655	60,000	98,000	98,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Other function	Total	46	121,250	50,690	87,000	110,000	160,000
	5-9	2	65,000	14,142	55,000	55,000	75,000
	10-14	3	63,194	32,370	26,000	78,582	78,582
	15-19	6	81,569	35,683	68,000	90,000	104,414
	20-24	6	150,298	71,315	102,287	108,000	225,000
	25-29	5	130,650	35,826	100,400	114,400	137,450
	30-34	11	133,057	52,231	87,000	113,000	171,600
	35-39	10	135,556	36,771	110,000	120,000	162,871
	40 or more	3	131,423	28,870	102,268	132,000	132,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Aerospace	Total	35	113,328	28,993	95,257	114,000	130,000
Ag chemicals	Total	36	110,037	25,585	92,500	102,000	129,000
Basic chemicals	Total	85	114,062	42,631	97,700	108,612	124,000
	25-29	21	103,950	15,943	90,000	105,000	109,000
	30-34	26	135,380	65,276	110,000	122,000	131,675
Biochemical prods	Total	34	111,528	40,887	80,000	101,733	125,000
Coatings, inks,	Total	49	102,164	26,915	82,000	98,700	120,000
Electronics/semicond	Total	57	121,219	41,419	93,000	110,000	131,100
Food	Total	33	106,873	31,820	83,000	100,000	135,000
Instruments	Total	56	103,744	33,359	80,000	97,000	120,000
Medical devices	Total	71	115,224	31,464	98,000	110,000	128,000
	25-29	18	120,280	30,010	102,000	110,000	121,067
Personal Care	Total	23	113,598	34,098	90,000	105,000	115,000
Petroleum	Total	62	127,670	34,180	104,000	124,020	145,608
	30-34	15	149,068	32,276	121,700	145,608	150,000
Pharmaceuticals	Total	496	126,891	41,884	99,000	120,000	148,231
	10-14	68	99,826	19,273	88,000	98,500	105,000
	15-19	85	111,678	24,579	96,500	110,000	125,000
	20-24	98	128,297	31,558	106,000	125,000	144,000
	25-29	93	133,057	33,842	105,600	127,600	157,000
	30-34	73	146,886	53,079	116,000	135,000	165,000
	35-39	40	159,382	60,581	123,739	149,500	195,000
	40 or more	25	135,106	55,951	102,268	136,000	165,000
Plastics	Total	79	123,838	44,896	95,250	112,900	130,000
	20-24	15	107,256	19,495	94,000	113,000	118,284
	25-29	17	129,497	57,854	93,000	112,000	143,244
Soaps	Total	30	110,041	29,840	90,000	108,000	127,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Specialty chems	Total	166	113,262	39,837	91,000	105,765	127,000
	15-19	17	97,182	16,295	85,000	98,300	104,000
	20-24	33	108,084	29,264	95,000	102,470	115,000
	25-29	36	117,383	44,109	92,100	113,800	130,000
	30-34	28	131,057	52,917	100,000	122,242	135,000
	35-39	25	120,550	38,196	100,000	115,000	136,000
Other manufacturing	Total	144	117,933	46,050	93,000	110,000	136,000
	15-19	18	94,329	19,849	82,500	90,000	109,200
	20-24	22	112,550	28,997	93,000	101,664	136,500
	25-29	26	127,204	38,289	105,000	115,223	140,000
	30-34	30	125,689	27,417	105,552	128,985	142,000
	35-39	23	124,020	32,645	102,000	122,192	141,000
Analytical serv lab	Total	25	81,793	40,183	52,000	80,000	101,950
Biotech research	Total	93	118,737	38,191	94,000	110,000	135,000
	10-14	20	94,364	25,665	84,000	94,000	101,920
	15-19	25	112,478	21,368	98,000	110,000	124,000
	20-24	17	131,768	29,577	110,000	127,000	145,000
	25-29	13	146,692	43,991	115,000	131,000	170,000
Contract res firm	Total	66	105,601	37,686	83,100	97,000	115,000
Non-profit	Total	26	82,263	26,682	62,000	80,000	106,270
Profl services	Total	59	147,060	61,944	101,500	130,000	180,000
	20-24	14	123,209	48,150	93,000	102,000	150,000
Research institution	Total	46	112,023	36,480	86,382	109,584	133,000
Other nonmanuf	Total	37	112,874	44,684	86,500	100,400	130,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific	Total	302	125,015	46,113	96,000	114,000	145,000
	10-14	34	97,421	15,599	89,000	95,000	110,000
	15-19	63	107,372	33,748	92,500	102,808	116,000
	20-24	57	131,504	36,294	102,000	120,000	150,000
	25-29	49	136,545	33,828	110,000	130,000	160,000
	30-34	44	145,558	67,941	105,000	130,000	165,000
	35-39	26	130,415	55,995	83,000	114,000	166,000
	40 or more	17	144,175	45,240	109,000	132,000	180,000
Mountain	Total	78	111,385	37,170	86,382	108,000	125,794
	30-34	17	116,344	25,075	98,500	117,125	125,262
West North Central	Total	108	119,675	50,014	97,000	110,000	130,000
	20-24	16	107,947	20,386	90,000	105,000	121,000
	25-29	17	118,108	39,557	89,000	104,275	126,000
	30-34	26	130,630	44,120	103,500	119,030	142,145
	35-39	19	125,217	22,194	105,000	120,000	141,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
West South Central	Total	126	114,106	31,795	94,000	110,000	130,000
	10-14	17	88,144	13,471	74,000	90,000	95,500
	20-24	19	107,161	13,598	100,000	105,000	115,000
	25-29	22	115,867	21,078	98,700	115,000	131,000
	30-34	29	125,453	29,222	110,000	122,000	147,400
	35-39	15	142,552	46,482	107,737	135,850	165,000
East North Central	Total	303	112,680	44,560	85,140	105,000	132,300
	10-14	30	86,346	23,836	76,000	84,370	99,998
	15-19	40	98,534	25,062	83,124	96,500	109,500
	20-24	51	109,909	38,542	90,250	102,000	132,000
	25-29	58	120,745	42,485	98,500	109,000	142,000
	30-34	55	131,463	54,932	101,000	122,000	148,000
	35-39	35	121,316	58,648	86,500	114,000	136,500
	40 or more	20	123,144	34,860	100,000	125,753	150,000
East	Total	46	104,242	33,544	86,000	96,500	120,000
Middle Atlantic	Total	410	119,833	38,396	95,000	111,216	135,000
	10-14	59	95,746	17,207	86,100	95,000	105,000
	15-19	46	104,052	19,417	90,000	99,500	116,000
	20-24	85	119,850	35,202	96,000	117,000	133,000
	25-29	78	121,329	32,476	102,802	114,004	136,500
	30-34	60	140,101	46,280	111,216	130,000	161,695
	35-39	44	137,328	43,550	107,000	127,208	160,000
	40 or more	24	141,591	52,403	106,968	130,000	175,000
South Atlantic	Total	267	113,291	39,361	89,600	106,392	128,688
	10-14	23	84,246	12,739	78,582	84,000	87,000
	15-19	32	105,068	37,896	84,000	100,900	110,288
	20-24	45	109,512	25,752	93,000	105,765	124,290
	25-29	52	116,829	25,110	100,000	109,000	130,000
	30-34	41	133,888	53,346	101,000	121,680	156,708
	35-39	31	121,516	41,779	101,000	115,000	134,000
	40 or more	29	126,157	48,198	93,000	121,500	150,000
New England	Total	190	122,770	40,458	98,417	116,000	146,365
	10-14	22	103,296	35,409	83,500	92,094	115,000
	15-19	36	122,733	35,707	101,000	119,500	127,000
	20-24	36	124,968	33,964	102,330	115,000	146,365
	25-29	39	134,791	56,855	97,000	122,287	159,000
	30-34	22	133,379	28,082	107,000	130,000	150,000
	35-39	18	122,008	34,861	100,473	117,300	142,411

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

Table 2.4.5
SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY
by TOTAL SUBORDINATES and YEARS SINCE BS
2007 ACS Salary Survey

			Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
T	None	Total	524	101,805	30,019	83,800	98,500	115,000
		5-9	28	78,370	15,905	66,000	81,000	90,000
		10-14	73	86,278	22,805	75,451	84,000	95,000
		15-19	72	91,775	22,648	80,000	90,000	101,733
		20-24	87	106,010	29,551	92,000	102,000	115,000
		25-29	92	109,402	28,969	92,100	105,600	121,000
		30-34	77	111,169	31,900	90,000	110,000	122,242
		35-39	61	106,793	31,869	90,000	106,000	122,192
		40 or more	34	114,204	34,947	95,000	107,000	130,000
	1-2	Total	490	105,575	28,751	89,100	103,000	120,000
		5-9	30	81,657	11,765	75,000	81,000	88,000
		10-14	71	92,369	15,320	84,370	94,500	100,500
		15-19	76	100,216	28,338	85,728	99,000	108,612
		20-24	86	106,357	26,362	91,000	104,000	125,000
		25-29	78	108,707	25,137	98,700	105,000	117,000
		30-34	77	117,789	26,591	100,000	115,400	126,000
		35-39	46	115,554	39,850	96,500	112,000	142,411
		40 or more	24	121,010	38,982	113,000	121,540	131,000
	3-9	Total	143	114,686	33,266	91,286	109,900	133,200
		15-19	23	102,253	20,234	95,000	100,900	109,668
		20-24	35	121,234	33,998	93,000	120,000	140,000
		25-29	28	119,689	27,485	105,000	113,800	140,000
		30-34	23	123,834	37,947	107,532	121,680	142,000
	10-14	Total	117	116,932	35,662	99,800	114,004	130,000
		15-19	24	110,848	15,127	102,000	110,000	119,500
		20-24	20	114,159	20,307	98,000	115,000	130,000
		25-29	24	114,741	25,961	99,800	113,400	132,280
		35-39	16	142,055	47,003	95,000	129,400	151,000
	15-29	Total	83	126,593	33,849	100,000	120,000	143,240
		25-29	19	130,667	29,752	100,000	129,600	153,216
	30-49	Total	62	123,042	39,829	95,000	115,000	150,000
	50 or more	Total	445	147,702	52,455	115,725	137,211	167,000
		10-14	24	102,470	25,174	83,000	95,500	114,000
		15-19	54	123,930	35,040	100,000	118,500	135,000
		20-24	82	141,939	37,195	116,000	135,000	163,100
		25-29	89	153,534	43,237	122,100	144,500	181,000
		30-34	97	165,570	60,600	130,180	150,000	180,000
		35-39	57	151,330	55,589	115,000	137,211	182,000
		40 or more	39	157,671	71,004	113,000	150,000	175,600

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Less than 50	Total	185	108,440	53,139	80,000	99,000	128,000
	10-14	17	89,335	24,839	70,700	84,000	99,000
	15-19	30	86,365	27,826	74,500	85,000	99,000
	20-24	35	114,006	47,376	80,000	108,000	140,000
	25-29	30	122,492	46,970	90,000	109,000	150,000
	30-34	25	111,313	51,078	80,043	101,000	150,000
	35-39	20	105,455	32,505	86,500	108,437	117,300
	40 or more	21	138,232	101,268	70,000	109,000	163,000
50 to 99	Total	89	112,953	48,018	84,000	100,000	123,000
	10-14	15	82,860	13,884	72,000	83,200	85,200
	15-19	20	111,933	30,116	94,000	103,000	120,000
	25-29	16	121,824	53,110	84,000	100,000	153,000
100 to 499	Total	186	111,240	35,559	89,000	104,500	130,000
	10-14	33	95,017	29,569	78,000	92,000	105,000
	15-19	32	97,149	21,944	80,000	95,000	105,000
	20-24	28	127,453	32,569	93,000	128,000	147,800
	25-29	31	117,022	31,389	99,800	107,500	130,000
	30-34	22	125,273	36,622	96,000	113,000	140,000
	40 or more	22	123,791	39,810	109,000	127,000	132,000
500 to 2,499	Total	173	120,958	53,156	88,900	106,000	130,000
	10-14	19	85,167	19,473	78,582	83,000	95,000
	15-19	32	115,952	55,482	88,900	98,300	123,000
	20-24	30	119,708	41,394	92,000	105,000	131,224
	25-29	30	118,235	34,797	92,000	116,000	130,000
	30-34	30	155,641	72,456	106,670	130,000	170,000
	35-39	18	112,271	47,624	84,000	100,000	122,000
2,500 to 9,999	Total	226	116,606	39,134	95,000	110,000	129,908
	10-14	19	85,596	16,911	72,848	90,000	97,524
	15-19	26	108,686	32,736	90,000	102,808	110,288
	20-24	41	116,461	28,546	97,000	105,765	133,200
	25-29	48	117,505	36,894	96,500	110,913	129,600
	30-34	44	138,212	51,189	110,000	122,242	150,000
	35-39	27	122,741	39,613	107,737	118,699	133,700
10,000 to 24,999	Total	216	112,706	36,010	91,000	105,000	125,262
	10-14	27	90,808	15,384	79,995	88,215	97,606
	15-19	28	106,630	26,439	90,000	100,000	118,042
	20-24	38	110,989	28,053	95,000	105,000	122,312
	25-29	40	122,486	47,505	98,280	110,000	123,000
	30-34	42	125,740	43,423	103,400	122,000	134,815
	35-39	20	123,220	26,514	104,000	120,000	136,120
25,000 or more	Total	556	124,163	35,457	101,664	120,000	142,411
	5-9	17	89,086	8,371	82,500	88,000	93,450
	10-14	60	100,779	18,317	87,200	99,500	105,000
	15-19	73	111,736	18,834	98,500	109,500	125,000
	20-24	106	118,645	27,991	101,306	118,284	133,000
	25-29	101	128,832	28,736	105,648	125,000	144,500
	30-34	98	140,846	45,136	116,000	134,760	160,000
	35-39	67	140,406	39,370	114,758	137,211	160,400
	40 or more	33	134,739	44,978	106,968	131,100	160,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BA or BS	Total	97	71,396	25,157	52,000	65,400	85,286
	30-34	18	87,944	25,182	63,000	88,000	100,000
MS	Total	93	77,013	26,404	55,000	76,344	95,394
	25-29	22	82,934	21,296	63,814	82,000	102,000
	35-39	16	76,624	33,216	48,400	84,000	95,394
PHD	Total	277	104,925	29,598	85,000	104,743	121,967
	10-14	33	80,017	20,812	64,000	84,000	98,000
	15-19	30	90,120	22,527	83,827	89,985	101,500
	20-24	40	109,746	24,468	91,000	109,452	120,719
	25-29	33	111,947	26,373	97,000	105,370	120,000
	30-34	48	120,948	27,930	105,471	117,624	139,793
	35-39	38	113,038	28,863	104,600	118,000	131,978
	40 or more	45	107,668	30,322	88,000	107,000	123,000

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
2007 ACS Salary Survey

			Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
9-10 month	RANK	Full professor	371	96,307	34,180	72,978	89,000	110,000
		Assoc professor	191	71,694	57,067	54,500	64,953	76,662
		Asst professor	204	55,871	11,963	48,000	53,000	60,520
		Instructor, adjunct	45	54,112	18,206	42,000	50,000	60,100
		Secondary teacher	25	56,990	17,404	47,400	60,000	62,000
11-12 month	RANK	Full professor	124	134,341	53,720	95,000	119,210	160,000
		Assoc professor	38	83,132	31,992	61,100	76,784	103,000
		Asst professor	51	67,982	18,497	52,884	65,000	79,000
		Instructor, adjunct	24	80,948	46,369	54,386	62,000	100,532
		Research appt	102	68,384	28,255	45,000	65,000	80,000
		Other nonfaculty	63	82,074	58,056	50,000	71,000	96,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Full professor	Total	369	96,210	34,167	72,800	89,000	110,000
	15-19	38	85,688	29,407	65,000	81,000	96,300
	20-24	65	90,485	28,345	71,000	82,000	110,000
	25-29	64	100,422	41,978	76,416	90,000	105,000
	30-34	61	95,056	32,209	72,978	87,000	100,140
	35-39	79	96,321	33,501	74,760	86,000	107,000
	40+	45	117,188	30,387	92,000	110,100	132,000
Assoc professor	Total	190	71,680	57,217	54,500	64,740	76,710
	5-9	30	60,065	13,141	50,400	54,000	65,000
	10-14	62	73,644	76,749	54,000	60,000	76,200
	15-19	43	68,611	18,028	57,000	70,000	75,000
	20-24	21	88,736	105,172	55,288	67,500	75,000
	25-29	19	73,138	14,624	60,595	70,137	82,500
Asst professor	Total	202	55,923	12,002	48,000	53,000	61,000
	2-4	40	54,104	10,478	46,100	53,500	58,000
	5-9	97	57,435	12,894	48,500	54,000	62,000
	10-14	38	55,000	11,920	49,200	52,387	57,000
Instructor,	Total	45	54,112	18,206	42,000	50,000	60,100
Secondary	Total	25	56,990	17,404	47,400	60,000	62,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Full professor	Total	122	135,522	53,198	96,000	120,000	162,500
	20-24	16	132,943	42,740	100,062	114,895	145,000
	25-29	22	128,873	48,943	100,481	110,000	170,200
	30-34	21	139,187	58,278	92,000	120,207	156,784
	35-39	32	157,129	55,604	120,000	156,000	176,000
	40+	13	150,764	56,920	91,486	147,642	175,000
Assoc	Total	38	83,132	31,992	61,100	76,784	103,000
Asst professor	Total	51	67,982	18,497	52,884	65,000	79,000
	2-4	10	59,640	14,467	48,000	55,000	74,000
	5-9	22	71,395	20,424	58,300	68,750	78,003
	10-14	10	74,159	15,699	65,000	69,836	85,000
Instructor,	Total	24	80,948	46,369	54,386	62,000	100,532
Research appt	Total	101	68,644	28,273	45,000	65,000	80,000
	2-4	18	51,056	17,136	38,000	45,000	65,000
	5-9	33	60,908	18,278	45,000	65,000	73,000
Other	Total	62	81,850	58,502	50,000	67,200	98,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Teaching	Full professor	207	80,666	22,892	65,300	77,000	90,000
	Assoc professor	138	71,651	66,125	54,000	60,000	74,922
	Asst professor	152	52,642	10,009	46,100	50,700	55,000
	Instructor, adjunct	42	52,215	16,607	42,000	48,300	60,000
Research	Full professor	93	118,318	37,674	92,000	106,000	140,000
	Assoc professor	33	72,789	22,059	65,000	75,000	81,000
	Asst professor	41	66,170	12,796	56,000	62,154	70,000
Administration	Full professor	15	112,457	32,263	92,866	120,000	125,000
Other	Secondary teacher	15	52,663	17,054	34,208	53,711	60,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Teaching	Full professor	28	95,106	32,708	72,000	90,771	108,000
	Asst professor	18	58,243	12,795	47,000	55,600	69,000
Research	Full professor	49	154,712	58,200	107,326	145,000	195,000
	Assoc professor	18	87,956	29,316	65,000	83,800	108,000
	Asst professor	30	73,934	19,536	61,200	74,000	85,000
	Research appt	90	66,519	27,978	44,000	63,654	80,000
	Other nonfaculty	21	56,116	25,201	33,000	50,000	76,200
Administration	Full professor	33	137,049	53,451	95,000	120,000	162,500
	Other nonfaculty	21	126,439	79,975	79,050	115,000	138,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Analytical chemistry	Full professor	29	85,786	15,468	76,416	85,707	93,000
	Assoc professor	15	66,941	13,468	57,924	67,500	73,150
Biochemistry	Full professor	35	102,821	31,729	72,400	100,000	128,000
	Assoc professor	15	65,175	13,017	54,500	61,500	70,000
	Asst professor	20	56,734	14,176	48,000	54,000	61,000
Chemical education	Full professor	76	77,189	20,502	60,976	74,707	86,710
	Assoc professor	42	74,544	92,877	53,000	56,000	63,800
	Asst professor	43	51,337	10,139	45,000	49,000	54,000
	Instructor, adjunct	20	52,544	14,910	42,000	50,000	58,000
	Secondary teacher	20	55,737	18,771	37,000	57,000	60,000
Environmental	Full professor	17	99,445	36,538	72,000	92,866	115,000
Inorganic chemistry	Full professor	35	93,440	31,191	76,700	88,903	96,679
	Assoc professor	24	86,590	98,349	55,288	65,232	75,000
	Asst professor	24	52,683	7,520	45,000	52,000	57,100
Organic chemistry	Full professor	68	93,302	27,266	72,437	87,000	107,000
	Assoc professor	35	63,416	16,068	52,118	64,174	75,000
	Asst professor	30	54,321	9,069	50,000	53,000	60,000
Physical chemistry	Full professor	50	112,038	41,253	78,000	100,800	126,470
	Asst professor	27	56,563	8,501	50,500	54,914	62,000
Polymer chemistry	Full professor	16	122,427	33,471	100,000	111,850	151,164

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Biochemistry	Full professor	32	158,004	59,937	115,000	145,000	191,000
	Research appt	20	57,911	22,110	42,000	50,000	65,250
Chemical education	Full professor	15	96,427	30,001	82,650	90,333	99,500

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
2007 ACS Salary Survey

			Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
T	Yes	Full professor	360	97,207	34,183	74,000	90,000	110,000
		Assoc professor	166	73,201	60,716	55,288	65,736	77,184
		Asst professor	16	52,376	7,183	46,000	50,000	60,000
	No, in tenure track	Assoc professor	19	66,461	17,824	52,000	60,124	76,500
		Asst professor	173	56,676	12,202	48,500	54,000	61,000
	No, no tenure track	Instructor, adjunct	31	49,146	16,576	37,500	47,750	51,825

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
2007 ACS Salary Survey

			Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
T	Yes	Full professor	111	135,690	55,453	95,000	120,000	162,714
		Assoc professor	21	71,748	16,646	60,000	75,000	81,000
	No, in tenure	Asst professor	37	71,057	19,318	56,000	69,836	80,879
	No, no tenure track	Instructor, adjunct	17	67,762	24,103	42,000	62,000	84,000
		Research appt	54	64,421	23,493	46,500	63,654	75,000
		Other nonfaculty	16	79,646	37,878	50,000	55,000	98,000
	Not applicable	Research appt	46	71,249	31,676	45,000	65,400	89,000
		Other nonfaculty	40	75,325	39,121	47,868	65,111	89,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Public	Full professor	242	99,790	33,354	76,000	92,000	114,000
	Assoc professor	110	78,166	73,818	56,000	68,000	80,000
	Asst professor	118	57,257	12,070	49,000	54,504	62,000
	Instructor, adjunct	27	59,019	21,078	42,100	52,000	68,000
	Secondary teacher	19	58,623	17,524	51,000	60,000	61,700
Private	Full professor	129	89,774	34,878	69,000	81,360	100,000
	Assoc professor	80	62,871	13,280	52,750	59,700	72,500
	Asst professor	86	53,969	11,616	45,800	51,000	60,000
	Instructor, adjunct	18	46,751	9,100	42,000	47,750	51,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Public	Full professor	91	132,687	46,121	100,000	119,210	156,000
	Assoc professor	24	88,083	30,933	65,000	80,150	103,000
	Asst professor	32	69,436	14,438	60,000	69,000	78,003
	Instructor, adjunct	15	81,551	39,820	56,800	70,000	98,320
	Research appt	69	64,359	28,062	42,000	60,000	80,000
	Other nonfaculty	46	76,991	62,212	48,000	61,804	85,000
Private	Full professor	33	138,901	71,278	82,000	134,000	195,000
	Assoc professor	14	74,646	33,125	46,000	62,000	100,000
	Asst professor	19	65,533	24,111	48,000	58,300	79,000
	Research appt	33	76,800	27,175	59,000	72,500	84,000
	Other nonfaculty	17	95,829	43,591	61,000	89,000	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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
AA-granting	Full professor	23	74,689	18,598	60,976	74,000	86,000
	Asst professor	16	50,619	9,295	42,000	49,300	53,095
BS-granting	Full professor	131	76,890	18,954	63,000	74,760	88,200
	Assoc professor	89	66,436	64,157	52,118	57,000	67,000
	Asst professor	101	50,461	8,475	45,000	49,200	53,500
MS-granting	Full professor	42	79,518	12,657	72,000	78,000	85,033
	Assoc professor	17	67,870	10,962	56,000	65,000	74,500
	Asst professor	20	54,070	4,344	50,000	54,000	57,000
PhD-granting	Full professor	169	118,724	35,609	92,564	110,000	140,000
	Assoc professor	69	80,285	59,694	65,000	75,000	82,000
	Asst professor	66	65,799	12,479	55,322	62,154	71,000
	Instructor, adjunct	19	52,301	15,863	42,100	50,000	57,000
High school	Secondary teacher	25	56,990	17,404	47,400	60,000	62,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BS-granting	Full professor	24	93,034	46,054	60,000	82,650	96,000
PhD-granting	Full professor	49	142,427	49,384	104,000	132,000	164,500
	Asst professor	21	66,586	15,697	52,884	65,000	79,000
	Instructor, adjunct	19	75,459	37,137	55,000	62,000	84,000
	Research appt	74	70,996	30,351	46,500	65,400	80,000
	Other nonfaculty	41	75,224	33,004	48,900	71,600	92,000
Medical school	Full professor	38	158,483	54,792	115,000	146,000	195,000
	Asst professor	17	80,146	18,546	65,000	76,000	85,000
	Research appt	27	61,350	21,063	42,000	63,654	68,500

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
2007 ACS Salary Survey

			Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Public	NonPhD-granting	Full professor	97	76,437	15,436	65,000	74,000	86,000
		Assoc professor	50	75,530	84,789	54,000	60,000	74,000
		Asst professor	69	51,470	8,617	47,000	50,128	54,000
		Instructor, adjunct	15	62,373	22,352	43,000	52,000	77,300
		No ranks	10	62,558	17,416	49,850	53,000	66,000
	PhD-granting	Full professor	140	116,317	33,122	92,000	109,000	138,000
		Assoc professor	56	80,557	66,042	65,000	73,000	81,000
		Asst professor	49	65,405	11,575	56,000	62,000	70,000
		Instructor, adjunct	12	54,825	19,488	35,000	52,000	65,000
	Secondary School	Secondary teacher	19	58,623	17,524	51,000	60,000	61,700
Private	NonPhD-granting	Full professor	99	77,937	19,763	64,000	77,000	89,284
		Assoc professor	67	59,719	10,613	52,000	57,924	67,363
		Asst professor	68	50,536	7,706	45,000	50,000	54,000
	PhD-granting	Full professor	29	130,344	44,645	94,500	115,000	163,000
		Assoc professor	13	79,114	14,152	64,740	81,000	90,000
		Asst professor	17	66,933	15,128	53,000	66,255	78,000

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
2007 ACS Salary Survey

			Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Public	NonPhD-granting	Full professor	21	107,193	40,662	88,000	95,000	111,780
	PhD-granting	Full professor	44	134,377	37,256	104,000	126,312	157,550
		Assoc professor	12	74,780	20,768	60,000	75,853	83,800
		Asst professor	16	67,066	16,505	55,600	65,000	78,003
		Instructor, adjunct	13	77,902	41,689	54,386	69,870	84,000
		Research appt	54	66,916	29,375	43,000	61,440	80,000
		Other nonfaculty	27	65,722	29,788	45,642	61,804	80,000
	Medical school	Full professor	26	150,418	55,405	112,000	127,729	162,714
Private	NonPhD-granting	Full professor	16	87,867	34,986	57,900	82,000	115,000
	PhD-granting	Research appt	20	82,013	30,939	60,000	75,000	87,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Men	Full professor	311	97,556	34,987	74,000	89,284	110,100
	Assoc professor	139	70,432	43,288	55,000	65,800	77,822
	Asst professor	145	55,395	12,291	48,000	53,000	60,000
	Instructor, adjunct	28	58,608	20,262	44,000	51,000	67,000
	Secondary teacher	16	61,098	15,994	52,000	60,000	69,000
Women	Full professor	58	89,917	29,514	70,000	88,200	101,000
	Assoc professor	50	74,487	85,542	53,800	60,000	75,000
	Asst professor	57	56,532	10,975	48,631	54,000	60,000
	Instructor, adjunct	17	46,706	11,183	36,550	47,750	52,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Men	Full professor	102	138,788	54,119	100,481	126,312	163,896
	Assoc professor	30	84,922	34,131	61,100	76,784	108,000
	Asst professor	34	71,336	19,734	55,600	69,836	82,700
	Instructor, adjunct	19	89,733	48,275	60,000	72,000	103,000
	Research appt	79	71,290	29,507	49,000	67,500	80,000
	Other nonfaculty	48	83,499	60,348	51,800	71,000	98,000
Women	Full professor	22	113,720	47,695	82,800	100,062	135,000
	Asst professor	17	61,274	13,941	47,000	60,000	69,000
	Research appt	23	58,402	21,068	42,000	51,000	65,000
	Other nonfaculty	15	77,515	51,682	40,000	57,650	85,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific	Full professor	40	105,574	35,338	80,000	90,000	125,000
Mountain	Full professor	21	102,919	41,314	79,400	93,000	109,000
West North Central	Full professor	25	82,000	28,353	61,230	76,700	85,000
	Assoc professor	25	61,828	14,707	53,196	65,232	70,500
	Asst professor	25	50,775	7,614	47,000	50,000	55,000
West South Central	Full professor	37	84,041	27,558	68,503	80,000	90,467
	Asst professor	17	53,003	14,594	43,000	50,000	54,590
East North Central	Full professor	69	90,986	31,872	67,858	82,000	107,000
	Assoc professor	37	75,819	81,249	53,000	60,000	77,822
	Asst professor	33	56,177	13,004	46,000	51,000	62,000
East South Central	Full professor	18	79,581	22,179	65,000	75,000	89,000
Middle Atlantic	Full professor	69	101,968	31,074	80,000	95,536	114,000
	Assoc professor	36	71,007	11,622	61,422	71,200	77,800
	Asst professor	43	58,519	12,564	50,500	54,000	61,037
South Atlantic	Full professor	58	99,992	40,233	70,850	90,800	124,073
	Assoc professor	31	89,559	106,702	56,500	68,000	81,000
	Asst professor	37	54,605	12,109	45,000	52,530	60,000
New England	Full professor	29	106,283	33,324	85,000	97,243	111,000
	Assoc professor	15	64,093	11,883	53,800	60,000	70,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific	Full professor	16	150,141	79,969	93,718	115,000	175,000
	Research appt	18	83,150	35,403	63,100	75,000	101,000
	Other nonfaculty	16	101,007	91,088	61,000	79,050	92,000
East North Central	Full professor	29	108,500	36,482	82,000	108,000	135,000
	Research appt	18	60,990	24,821	42,000	59,000	66,484
South Atlantic	Full professor	23	135,908	44,838	104,183	127,729	156,784
	Research appt	17	60,951	24,998	40,000	58,000	65,400

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Total		86	38,136	6,669	34,000	37,000	43,000
INSTITUTIONAL CONTROL	Public	56	36,797	6,439	33,000	36,000	40,000
	Private	30	40,634	6,464	35,500	40,000	45,000

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
2007 ACS Salary Survey

		Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BA or BS	Total	40	88,281	34,470	63,000	78,000	101,000
MS	Total	36	106,818	29,314	85,524	100,500	120,000
PHD	Total	84	128,146	68,690	96,000	113,633	145,210
	20-24	18	120,132	37,810	98,805	104,000	119,425
	25-29	16	121,986	23,607	104,000	113,633	130,000
	30-34	15	148,370	37,987	122,000	145,210	160,000

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

Appendix A: Survey Questionnaire

AMERICAN CHEMICAL SOCIETY

2007 Comprehensive Salary and Employment Status Survey

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

INCORRECT MARKS ✓ ✗ /// ▬

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.

Bachelor's	Master's	Doctorate
1900–2009	1900–2009	1900–2009

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.

	One field of degree	One work specialty
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, 2007. 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
- 10 to 19 years
- 20 or more years

6. If you are currently employed, is your job permanent or temporary? Fill in one.

- Permanent – Go to 8
- Temporary – Go to 8
- Agency temp – Go to 8
- Fixed term contract – Go to 8

7. If you were not employed but actively seeking employment on March 1, 2007, how long had you been unemployed? Fill in one.

- Less than 1 month
- 1 to 3 months
- 4 to 6 months
- 7 to 12 months
- More than 1 year

8. Regardless of your current status, was there any period when you were not employed but actively seeking employment in calendar year 2006? Fill in one.

- Yes
- No – Go to 9

If yes, how many total months were you not employed but actively seeking employment in calendar year 2006? Fill in one.

- Less than 1 month
- 1 to 3 months
- 4 to 6 months
- 7 to 11 months
- 12 months

9. What are the first three digits of the zip code of your current or most recent place of employment?

0–9	0–9	0–9

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, 2007? 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.

$,,, .00

SALARY THIS MARCH	Annual As of 3/1/07

DO NOT MARK IN THIS AREA

01234

11. 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 LAST MARCH — Annual As of 3/1/06

$ _____ .00

12. What was your total professional income during calendar year 2006? Include consulting fees, base annual salary, bonuses, earnings from second employer, overtime, summer teaching, and other supplemental earnings.

Calendar Year 2006

$ _____ .00

13. Were you eligible for bonus during calendar year 2006?

○ Yes ○ No – Go to 14

If Yes, did you receive a bonus?

○ Yes ○ No – Go to 14

If Yes, please indicate amount $ _____ .00

Calendar Year 2006

14. Did you receive stock as part of your annual professional income in 2006?

○ Yes ○ No

15. Was consulting your primary occupation in 2006?

○ Yes – Go to 16A ○ No

16. Did you do any consulting in 2006? Fill in one.

○ Yes ○ No – Go to Section III

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

○ Less than 10 hrs ○ 20 - 39 hrs ○ 100 or more hrs
○ 10 - 19 hrs ○ 40 - 99 hrs

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

$ _____ .00

Per hour

16C. What was your total consulting income during calendar year 2006?

$ _____ .00

Calendar Year 2006

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.

○ Public institution ○ 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			
	○ 1-25%	○ 34-50%	○ 67-75%
	○ 26-33%	○ 51-66%	○ 76-100%
Teaching, graduate			
	○ 1-25%	○ 34-50%	○ 67-75%
	○ 26-33%	○ 51-66%	○ 76-100%
Research			
	○ 1-25%	○ 34-50%	○ 67-75%
	○ 26-33%	○ 51-66%	○ 76-100%
Administration			
	○ 1-25%	○ 34-50%	○ 67-75%
	○ 26-33%	○ 51-66%	○ 76-100%
Other			
	○ 1-25%	○ 34-50%	○ 67-75%
	○ 26-33%	○ 51-66%	○ 76-100%

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 _____

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?

Total number Supervised As of 3/1/2006

IV. QUESTIONS ABOUT YOURSELF

28. What is your sex?

Male Female

29. What was your age on March 1, 2007?

Age As of 3/1/2007

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?

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 _____

V. MULTIDISCIPLINARY EMPLOYMENT 2007

In an effort to observe the trends in multidisciplinary employment of ACS Members, please take the time to answer the following questions.

33. Do you consider yourself an interdisciplinary scientist?

- ○ Yes
- ○ No
- ○ Not a practicing scientist

34. Besides chemistry, what disciplines do you use, yourself, in your work?

35. What technologies, developed within the past 5 years, enable or facilitate your work?

36. Does your job/work involve working directly on a team or with a group?

- ○ Yes
- ○ No - Go to 40

37. How large is your team or working group.

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

38. Does your team or working group include members with primary skills or disciplines other than your own?

- ○ Yes
- ○ No - Go to 40

39. What disciplines are involved in your team or working group other than your own. Fill in all that apply:

- ○ Other chemistry, please specify _____
- ○ Agricultural Sciences
- ○ Biological/Biomedical sciences
- ○ Health Sciences
- ○ Computer & Informational Sciences
- ○ Mathematics
- ○ Astronomy/Space Science
- ○ Atmospheric Science & Meteorology
- ○ Geological & Earth Sciences
- ○ Physics
- ○ Ocean/Marine Sciences
- ○ Engineering, please specify _____
- ○ Business/Marketing
- ○ Economics
- ○ Law
- ○ Other, please specify _____

40. How has working in a multidisciplinary environment affected your work?

Thank you.

Please provide any additional comments.

THANK YOU FOR YOUR PARTICIPATION.
PLEASE RETURN THIS QUESTIONNAIRE IN THE ENVELOPE PROVIDED

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Appendix B: Reprint of Employment & Salary Survey by Michael Heylin, *C&EN*

SHUTTERSTOCK

EMPLOYMENT & SALARY SURVEY

In 2007, job market for chemists continued to improve and SALARY GAINS HELD at recent level of close to 5%

MICHAEL HEYLIN, C&EN WASHINGTON

WHAT HAPPENED to the employment situation and salaries of chemists during the 12 months ending March 1, 2007, was not spectacular. But it was positive.

According to the American Chemical Society's latest annual survey of its members in the domestic workforce, 92.3% were employed full-time on that date, 3.6% were working part-time, 1.7% were on postdocs or fellowships, and 2.4% were unemployed but actively seeking employment.

The survey put the total of those with other than a full-time job at 7.7%. This was down from the all-time high of 9.2% in 2005, but it was still considerably higher than the recent low of 5.4% in 2001. The 2.4% unemployment rate for 2007 was the lowest since 2001, when it had been 1.5%.

The median salary for all respondents to the 2007 survey as a group paced inflation with a 3.5% increase to $88,000 from the median of $85,000 from the year-earlier survey. The median 2007 salary for bachelor's degree chemists as a group was $68,700. For those with master's degrees it was $80,000 and for Ph.D.s, $96,700. These salaries do not include overtime or bonuses.

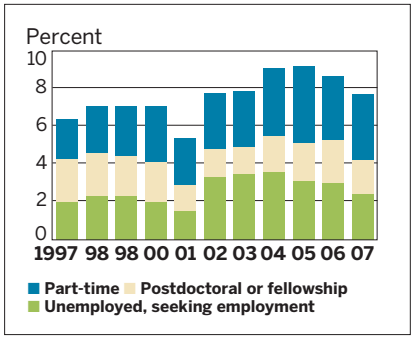
As always, in 2007, industrial chemists were the highest paid, with a median salary of $96,700, followed by government chemists at $90,000, and academics at $65,600.

Chemists as individuals posted a larger 4.7% increase in their median salary between March 1, 2006, and March 1, 2007—from $85,000 to $89,000. This rate of gain was the same as the average annual gain for the past decade.

This finding comes from a question that

EMPLOYMENT STATUS Unemployment among chemists dips again

		OTHER THAN FULL-TIME EMPLOYMENT			
	FULL-TIME	PART-TIME	POSTDOC	UNEMPLOYED/ SEEKING EMPLOYMENT	TOTAL
1997	93.5%	2.1%	2.3%	2.0%	6.4%
1998	92.9	2.5	2.3	2.3	7.1
1999	92.9	2.7	2.1	2.3	7.1
2000	92.9	3.0	2.1	2.0	7.1
2001	94.6	2.5	1.4	1.5	5.4
2002	92.2	3.0	1.5	3.3	7.8
2003	92.1	3.0	1.4	3.5	7.9
2004	90.9	3.6	1.9	3.6	9.1
2005	90.8	4.1	2.0	3.1	9.2
2006	91.3	3.4	2.3	3.0	8.7
2007	92.3	3.6	1.7	2.4	7.7



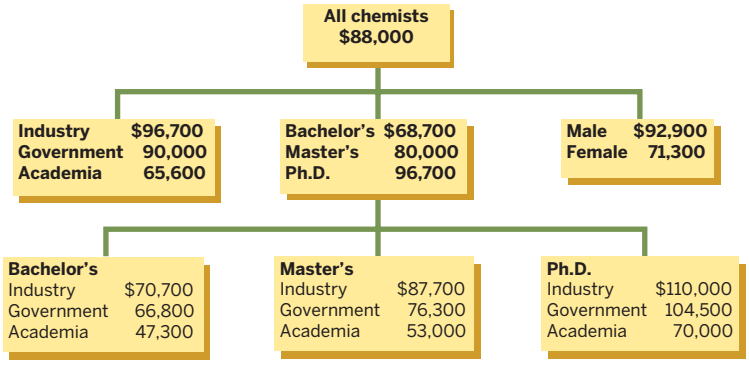
NOTE: As of March 1 each year. Based on population that excludes those fully retired or otherwise not employed and not seeking employment.
SOURCE: ACS salary survey 2007

asked respondents for their salaries as of both dates. This approach has the advantage that salary data for both years come from the same set of respondents to a single survey. It also accounts for pay gains due to promotions and growing responsibilities for individual chemists. It avoids the variance inherent in measuring salary gains as the difference between medians from separate surveys done one year apart and using different member samples.

The median salary is the middle salary—that which is equaled or exceeded by half of the population.

MEDIAN BASE SALARIES

Ph.D. chemists earn about 50% more than do bachelor's



NOTE: Median annual base salary for chemists with full-time employment. **SOURCE:** ACS salary survey 2007

All of these changes came while the national employment situation, as measured by the Bureau of Labor Statistics (BLS), posted a fairly solid improvement between early 2006 and early 2007. This speeded up what had been a relatively slow recovery from the job losses that occurred during and after the mild economic recession in 2001. However, job growth nationally has slowed quite sharply in recent months.

The ACS 2007 survey involved sending 21,000 questionnaires to a random sample of about 90,000 members most likely to have been in the domestic workforce. They were U.S. residents under 70 years old who were not in the emeritus, retired, or student membership categories. There were a total of almost 7,200 responses, including about 6,500 from members actually in the workforce. Respondents no longer working accounted for most of the rest.

Of the responses, 5,900 came by mail and 1,300 by Internet. Responses from those who indicated they were fully retired or otherwise not in the workforce were not included in the sample analysis.

The response rate was about 34%, down from close to 50% a decade ago. Due to this decline, the dwindling number of respondents working as chemical engineers, about 250 in 2007, was too small for meaningful separate analysis as in previous years.

For 2007, data from both chemist and chemical engineering respondents were combined into a single group. As chemical engineers are traditionally somewhat better paid than chemists, there was a slight upward tick relative to the chemist-only salary data from earlier surveys.

The 2007 survey was conducted by Gareth S. Edwards and Jeffrey R. Allum of the ACS Department of Member Research & Technology under the general guidance of the ACS Committee on Economic & Professional Affairs. A full report will be available later this year from the ACS Office of Society Services. This report will also be available as a PDF on the ACS website (www.acs.org).

The percentage of chemists in the workforce who are women has risen from about 9% 30 years ago to 15.0% in 1985 and 24.2% in 2000. Since then there has been little progress, with the percentage of women actually dropping from 25.8% in 2006 to 25.5% in 2007. However, with women today earning 52% of chemistry bachelor's degrees, 52% of master's degrees, and 31% of Ph.D.s, the potential for further feminization of chemistry is still there (C&EN, Dec. 3, 2007, page 73). In 2007, 33% of bachelor's degree respondents in

SALARY TRENDS

Constant-dollar median base salary of Ph.D. chemists and of chemists as a group has been declining for past four years

	BACHELOR'S		MASTER'S		PH.D.		ALL CHEMISTS	
$ THOUSANDS	CURRENT $	CONSTANT $ 2007	CURRENT $	CONSTANT $ 2007	CURRENT $	CONSTANT $ 2007	CURRENT $	CONSTANT $ 2007
1997	$49.4	$64.3	$56.2	$73.2	$71.0	$92.4	$63.0	$82.0
1998	49.6	63.6	57.7	74.0	73.3	94.0	65.0	83.3
1999	50.1	62.8	61.0	76.5	76.0	95.3	68.0	85.3
2000	53.1	64.4	62.0	75.2	79.0	95.8	70.0	84.9
2001	55.0	64.9	65.0	76.7	82.2	97.0	73.0	86.1
2002	58.0	67.3	68.5	79.5	85.2	98.9	76.5	88.8
2003	59.7	67.8	71.3	81.0	90.0	102.2	80.0	90.9
2004	62.0	68.6	72.3	80.0	91.6	101.3	82.0	90.7
2005	63.0	67.4	74.0	79.2	93.0	99.5	83.0	88.8
2006	65.2	67.5	77.5	80.3	95.0	98.4	85.0	88.1
2007	68.7	68.7	80.0	80.0	96.7	96.7	88.0	88.0
AVERAGE ANNUAL CURRENT-DOLLAR SALARY INCREASE								
2006–07	5.4%		3.2%		1.8%		3.5%	
1997–07	3.3		3.6		3.1		3.4	
AVERAGE ANNUAL INCREASE IN CONSUMER PRICE INDEX								
2006–07	3.6%							
1997–07	2.7							

NOTE: Median base salaries for those with full-time jobs as of March 1 each year. **SOURCES:** ACS salary surveys, Bureau of Labor Statistics (consumer price index)

SALARIES OF CHEMISTS AS INDIVIDUALS

Chemists log an average pay gain of 4.7%

MEDIAN SALARY, $ THOUSANDS	2006	2007	2006–07 $ GAIN	2006–07 % GAIN
ALL	**$85.0**	**$89.0**	**$4.0**	**4.7%**
BY DEGREE				
Bachelor's	65.0	69.7	4.7	7.2
Master's	78.0	81.6	3.6	4.6
Ph.D.	93.3	98.4	5.1	5.5
BY GENDER				
Men	90.0	94.0	4.0	4.4
Women	69.0	73.0	4.0	5.8
BY ETHNICITY				
Hispanic	78.0	81.6	3.3	4.2
BY CITIZENSHIP				
Native born	84.5	88.2	3.7	4.4
Naturalized	95.3	100.0	4.7	4.9
Permanent resident	83.9	89.9	6.0	7.2
Other visa	61.5	65.0	3.5	5.7
BY EMPLOYER				
Industry/business	93.6	98.0	4.4	4.7
Government	87.5	92.5	5.0	5.7
Academia	64.0	67.5	3.5	5.5
BY AGE				
20–29	46.6	50.0	3.4	7.3
30–39	69.0	73.0	4.0	5.8
40–49	87.5	92.5	5.0	5.7
50–59	97.7	100.6	2.9	3.2
60–69	94.0	98.5	4.5	4.8

NOTE: Salaries as of March 1.**SOURCE:** ACS salary survey 2007

ACS MEMBERS IN THE WORKFORCE

Since 1985, considerable change by gender and highest degree; since 1995, little change by race

	1985	1995	2000	2005	2006	2007
BY GENDER						
Men	85.0%	78.5%	75.8%	74.9%	74.2%	74.6%
Women	15.0	21.5	24.2	25.1	25.8	25.5
BY DEGREE						
Bachelor's	25.4	24.3	22.1	19.9	19.6	18.9
Master's	17.9	16.9	17.4	17.0	17.7	17.3
Ph.D.	56.7	58.8	60.5	63.1	62.7	63.8
BY RACE						
American Indian	na	0.2	0.2	0.2	0.2	0.2
Asian	na	10.3	11.1	10.9	11.7	11.4
Black	na	1.4	1.9	1.9	1.9	1.9
White	na	85.8	85.5	85.8	84.3	84.5
Other	na	2.3	1.3	1.2	1.9	2.0
BY ETHNICITY						
Hispanic	na	2.3	2.5	2.6	2.8	3.0
BY CITIZENSHIP						
Native born	87.6	82.3	79.5	79.8	79.3	79.7
Naturalized	8.0	8.5	10.2	10.2	10.7	10.5
Permanent residents	3.7	7.1	6.9	6.5	6.5	6.2
Other visa	0.7	2.1	3.4	3.5	3.5	3.6
BY AGE						
Under 40	42.8	40.7	34.1	27.8	33.0	27.9

na = not available. **SOURCE:** ACS annual salary surveys

the workforce were women, as were 36% of master's degree- and 21% of Ph.D.-holders

It should be noted that the growing presence of women chemists continues to percolate up through the ranks of the chemical profession by age. In 2007, 50% of survey respondents two to four years beyond earning their bachelor's degrees were women, as were 44% of those five to nine years beyond and 34% of those 10 to 14 years beyond. This tails off to just 14% of chemists 35 years or more beyond earning their bachelor's degree.

The makeup of the chemistry profession by race and ethnicity continues to change only slowly. In 1995, 85.8% of survey respondents identified themselves as white. In 2007, 84.5% did so. Asians showed a gain over the period—from 10.3% to 11.4%. Blacks, about 13% of the U.S. population, moved up from 1.4% of chemists to 1.9%. Hispanics, about 14% of the U.S. population, showed a similar small gain, from 2.3% to 3.0%.

Asians, who make up about 4% of the U.S. population, will remain well represented. This is largely due to foreigners who come to the U.S. for their chemistry education and stay. But all signs indicate that although blacks and Hispanics are making some progress in chemistry, they will remain substantially underrepresented, despite all best efforts to encourage them into the field. Chemistry continues to attract disproportionately few blacks or Hispanics, each accounting for only about 4% of chemistry graduating classes (C&EN, Dec. 3, 2007, page 73).

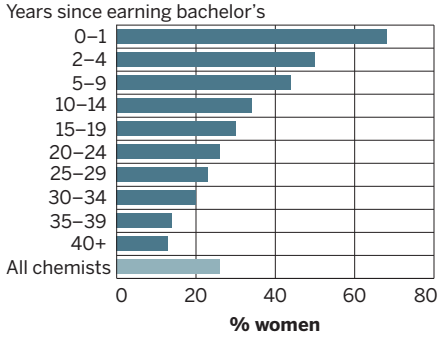
Chemists in the workforce are becoming better educated. In 1985, 25% of respondents to the ACS survey had a bachelor's as their highest degree. By 2007, this was down to 19%. Over the same period, the percentage with a Ph.D. degree rose from 57% to 64%. Those with master's degrees held at close to 17%.

The biggest recent demographic change for chemists has been in their age. In 1985, 43% of survey respondents were younger than 40 years old, as were 41% in 1995. Since then, this has tumbled to 28%. The median age for all respondents is now 48—50 for men, 43 for women.

The demographics of chemists indicate that those with bachelor's and Ph.D.s are

A CHANGING DYNAMIC

The youngest working chemists are mostly women



NOTE: Based on working chemists with full-time jobs.
SOURCE: ACS salary survey 2007

quite different populations. For instance, 92% of those with bachelor's degrees are born into U.S. citizenship, compared with a lower 75% of Ph.D.s. Only 2.2% of the bachelor's degree-holders are not U.S. citizens compared with 13% of Ph.D.s. Of the bachelor's respondents, 83% work in business or industry and 7%, in academia. For Ph.D.s, this breakdown is 52% and 39%, respectively.

THE EMPLOYMENT situation of chemists in 2007 showed the usual variations. Women are more likely than men to work part-time, 5.2% versus 3.0%. They are also more likely to be postdocs—2.3% versus 1.5%. Asians are also more likely to be postdocs, 4.6% versus 1.4% of whites. And the percentage of chemists working part-time increases with age, up to 9.3% of 60- to 69-year-olds.

A majority of chemists continue to work in manufacturing—51% in 2007. This is down from 55% in 2002. Chemical manufacturing now accounts for 15% of the jobs; pharmaceutical, biotech, and health-related manufacturing for 21%; and other manufacturing for another 15%. The percentage of those working in academia, including high schools, is on the rise, from 24% in 2002 to 29% in 2007. Analytical and research services jobs accounted for the jobs of another 7% in 2007 and government service, 8%.

In the 2007 survey, 39% of respondents indicated their work specialty to be a classic chemistry discipline—analytical, inorganic, organic, physical, or polymer chemistry. Another 3% indicated general chemistry, for a total of 42% indicating chemistry. Chemistry-related fields—such as biochemistry and materials science—claimed 43%, whereas 4% worked in chemical engineering and 11% were involved in nonchemistry activities.

This profile of respondents' work specialties is at variance with the profile of the respondents' specialties for their highest degrees—a total of 69% in chemistry, 18% in chemistry-related fields, 6% in chemical engineering, and 7% in nonchemistry disciplines.

The profile of specialty by gender indicates relatively low percentages of women working in physical chemistry, 15% of the total; polymer chemistry, 18%; organic chemistry, 19%; and inorganic chemistry, 20%. Women's highest saturation is into biochemistry and chemical educa-

AGE OF CHEMISTS

Median age gap between men and women chemists is seven years

	MEDIAN AGE	MEAN AGE
ALL CHEMISTS	**48**	**47.3**
BY GENDER		
Men	50	48.8
Women	43	43.2
BY DEGREE		
Bachelor's	45	43.8
Master's	50	48.2
Ph.D.	48	48.0
BY EMPLOYER		
Industry/business	47	46.0
Government	50	48.4
Academia	47	47.3
BY RACE		
Asian	43	43.8
Black	45	45.3
White	49	48.0
BY ETHNICITY		
Hispanic	43	43.7
BY CITIZENSHIP		
Native born	49	48.0
Naturalized	50	50.1
Permanent resident	41	41.2
Other visa	35	35.9

NOTE: Median age of all chemists employed full-time as of March 1, 2007. **SOURCE:** ACS salary survey 2007

EMPLOYMENT DEMOGRAPHICS

Except by age, job situation varies littleby demographic factors

	EMPLOYED			UNEMPLOYED/ SEEKING EMPLOYMENT
	FULL-TIME	PART-TIME	POSTDOC	
ALL CHEMISTS	**92.3%**	**3.6%**	**1.7%**	**2.4%**
BY DEGREE				
Bachelor's	94.1	3.0	0.2	2.7
Master's	92.3	4.6	0.1	3.0
Ph.D.	91.7	3.5	2.6	2.2
BY GENDER				
Men	92.9	3.0	1.5	2.6
Women	90.4	5.2	2.3	2.0
BY RACE				
Asian	91.4	1.9	4.6	2.1
Black	92.9	3.1	2.4	1.6
White	92.3	3.9	1.4	2.5
BY AGE				
20–29	87.5	0.6	9.6	2.3
30–39	92.3	2.2	4.6	0.9
40–49	95.4	2.0	0.6	2.0
50–59	92.6	3.9	0.1	3.5
60–69	87.1	9.3	0.0	3.6

NOTE: As of March 1, 2007. Excludes those retired or otherwise unemployed but not seeking employment. **SOURCE:** ACS salary survey 2007

DEMOGRAPHICS BY DEGREE

There are big differences between bachelor's and Ph.D. populations

	BACHELOR'S	MASTER'S	PH.D.	ALL
BY GENDER				
Men	66.9%	64.1%	79.1%	74.4%
Women	33.1	35.9	20.9	25.5
BY RACE				
American Indian	0.1	0.1	0.2	0.2
Asian	4.3	10.6	13.5	11.4
Black	2.3	1.6	1.6	1.7
White	91.0	85.6	83.1	84.9
Other	2.4	2.2	1.6	1.8
BY ETHNICITY				
Hispanic	3.3	2.5	3.0	3.0
BY CITIZENSHIP				
Native born	92.4	83.9	75.1	79.7
Naturalized	5.4	9.7	11.9	10.4
Permanent resident	1.6	4.0	8.1	6.3
Other visa	0.6	2.4	4.9	3.7
BY EMPLOYER				
Business/industry	82.6	69.7	52.0	60.4
Government	9.6	10.0	7.6	8.3
Academia	6.5	19.1	39.0	29.9
Self-employed	1.4	1.2	1.4	1.4

HOW TO READ THIS TABLE: Using the example of men, 66.9% of bachelor's degree respondents are male, as are 64.1% of master's, 79.1% of Ph.D.s, and 74.4% of all respondents. **NOTE:** Data are for employed ACS members as of March 1, 2007. **SOURCE:** ACS salary survey 2007

WHERE CHEMISTS WORK More than half of chemists work in manufacturing

% OF CHEMISTS	2002	2003	2004	2005	2006	2007
MANUFACTURING	**55%**	**54%**	**56%**	**52%**	**51%**	**51%**
Chemical & related	17	15	17	15	15	15
Pharma/health/biotech	22	21	23	22	23	21
Other manufacturing	16	18	16	15	13	15
ACADEMIA	**24**	**26**	**24**	**27**	**29**	**29**
University/four-year college	19	20	18	21	20	22
Two-year college	2	2	2	2	3	2
Medical school	1	2	2	2	3	3
High school	2	2	2	2	2	2
Other	na	na	na	na	1	na
NONMANUFACTURING/ NONACADEMIA	**20**	**20**	**17**	**21**	**18**	**18**
Analytical/research services	9	9	9	9	7	7
Government	8	8	7	8	8	8
Other	3	3	1	3	3	3
SELF-EMPLOYED	**1**	**1**	**3**	**1**	**2**	**2**

NOTE: Percentages of chemists at all degree levels with full-time jobs as of March 1, 2007. **SOURCE:** ACS salary survey 2007

WORK SPECIALTY/HIGHEST DEGREE Many with degrees in classic chemistry disciplines work in other fields

	PERCENT OF TOTAL		PERCENT WHO ARE WOMEN	
	WORK SPECIALTY	HIGHEST DEGREE	WORK SPECIALTY	HIGHEST DEGREE
GENERAL CHEMISTRY	**3%**	**11%**	**33%**	**38%**
CLASSICAL CHEMISTRY	**39**	**58**	**23**	**22**
Analytical	15	11	32	27
Inorganic	3	10	20	24
Organic	10	24	19	19
Physical	4	10	15	21
Polymer	7	3	18	22
OTHER CHEMISTRY	**43**	**18**	**29**	**33**
Agricultural/food	3	1	26	34
Biochemistry	4	8	37	33
Biotechnology	4	1	27	41
Chemical education	7	2	37	41
Clinical chemistry	1	0	26	71
Environmental chemistry	6	2	28	28
Materials science	5	1	17	26
Medicinal/pharmaceutical	10	2	24	25
Other chemical sciences	3	1	24	32
CHEMICAL ENGINEERING	**4**	**6**	**15**	**18**
NONCHEMISTRY	**11**	**7**	**27**	**27**
Business administration	2	2	23	17
Computer science	1	0	21	25
Law	1	0	23	11
Other nonchemistry	7	5	30	32

HOW TO READ THIS TABLE: Using the example of analytical chemistry, 15% of respondents, 32% of whom were women, work in analytical chemistry; 11% of respondents, 27% of whom are women, have their highest degree in analytical chemistry. **SOURCE:** ACS salary survey 2007

tion, each claiming 37% of the total, and analytical chemistry, 32%.

Of academics responding to the 2007 survey, 16% of full professors were women, as were 27% of associate professors and 29% of assistant professors. These levels are somewhat higher than the 11%, 20%, and 22% levels, respectively, from a recent C&EN survey of faculty at the 100 chemistry departments spending the most on research (C&EN, Dec. 24, 2007, page 44). That the ACS survey includes faculty members from nonresearch departments may explain this difference; such departments tend to have a higher percentage of women faculty.

MEDIAN SALARIES of $71,300 for all women respondents to the ACS 2007 survey and $92,900 for all male respondents, at first glance, indicate something amiss in these days of legislated equal opportunity and reward. However, two factors explain much of this difference: The men, on average are seven years older than the women, and the men are, as a group, better qualified academically.

Comparison of the salaries of men and women chemists with the same degree, the same amount of experience, and the same type of employer reveals a more even playing field. By five-year age groups from five to nine years beyond the bachelor's degree to 30 to 34 years beyond, women Ph.D. chemists in industry earn from 90 to 99% what their comparable male colleagues earn. With the exception of one anomaly in each case, the range is from 91 to 99% for master's degree chemists and from 88 to 102% for those with a bachelor's.

The pattern is similar for academic chemists. Women full professors with nine-month contracts in bachelor's-granting departments actually earn more than men, $78,200 versus $73,200. At master's and Ph.D. institutions, women earn 91% as much. All this does not demonstrate full salary equality for female chemists. But it indicates that equality is closer than the overall medians for men and women might suggest.

The dominant single determining factor in chemists' salaries remains their experience. In 2007, chemists 35 to 39 years beyond their bachelor's degree had a median salary of $100,000. This is almost 40% higher than the $72,000 for chemists 20 years their junior.

The data on academic salaries bring out the financial significance of a full professorship. Full professors with 11- to 12-month contracts at Ph.D.-granting schools had a median salary of $131,200 in 2007. This com-

pares with $77,900 for associate professors and $68,900 for assistant professors.

For those with nine-month contracts, salary medians were $110,000, $75,800, and $65,000, respectively.

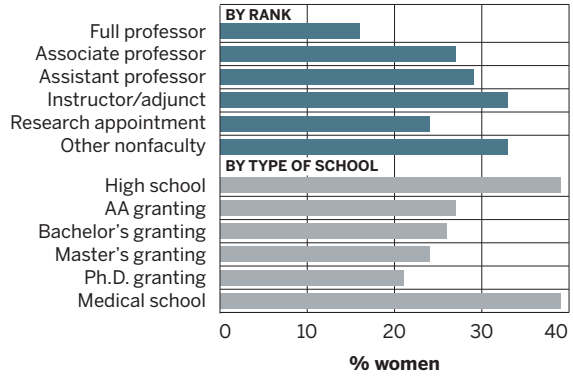
As would be expected, industrial chemists' salaries vary considerably by work function. Those in R&D management and general management are well-rewarded with median salaries for Ph.D.s of $140,000 and $121,000, respectively. At the other end of the scale are Ph.D.s in analytical services, with a median of $100,000, and in production/quality control at $102,100. Basic and applied research both come in at $105,000.

In 2007, as always, industrial salaries varied by size of the employer. For Ph.D.s, the range was from $92,000 for employers with fewer than 50 employees to $120,000 for employers with 25,000 or more.

The salaries of chemists in industry cover a quite broad range. In 2007, the highest paid 10% of those with a bachelor's had a median salary of $112,000 compared with $41,600 for the 10% lowest paid. The differential for master's degree chem-

CHEMISTRY FACULTIES BY GENDER

Women have more than a foothold, but their share of full professorships is still low



AA = associate of arts degree. **SOURCE:** ACS salary survey 2007

INDUSTRIAL CHEMISTS' SALARIES BY EXPERIENCE AND GENDER

Ph.D. women's pay holds close to that of men

YEARS SINCE BACHELOR'S DEGREE	BACHELOR'S MEN	BACHELOR'S WOMEN	BACHELOR'S WOMEN AS % OF MEN	MASTER'S MEN	MASTER'S WOMEN	MASTER'S WOMEN AS % OF MEN	PH.D. MEN	PH.D. WOMEN	PH.D. WOMEN AS % OF MEN
2–4	$47.3	$43.8	93%	na	na	na	na	na	na
5–9	54.5	55.7	102	$63.5	$57.7	91%	$82.2	$78.5	95%
10–12	65.0	64.0	98	77.5	71.2	92	90.3	89.0	99
15–19	75.0	66.0	88	84.0	77.7	93	101.0	100.0	99
20–24	81.0	71.0	88	94.8	90.0	95	115.0	104.0	90
25–29	93.4	72.0	77	97.5	81.0	83	116.0	115.0	99
30–34	93.8	84.5	90	98.0	97.0	99	127.3	116.5	92

NOTE: Median full-time base salaries as of March 1, 2007. **na** = not applicable. **SOURCE:** ACS salary survey 2007

WHO IS A CHEMIST?

A Challenge For Surveyors Of Chemists

Those who gather data on chemists are faced with the task of defining who they will gather it from. There is no single definition of a chemist. Is it anybody with a chemistry degree, or chemistry as their highest degree? Is it anybody who works in chemistry or a related science? Is it a member of the American Chemical Society?

In gathering data on the number of new chemistry graduates each year at the bachelor's, master's, and Ph.D. levels, the National Science Foundation (NSF) and the National Center for Education Statistics (NCES) use a narrow definition of chemistry. They include only those who earn their degrees in a classic chemistry discipline. They count such graduates from more than 1,000 departments.

The ACS Committee on Professional Training (CPT) also compiles annual data on chemistry graduates. But its totals are of all degrees awarded by the about 630 chemistry departments that have undergraduate programs CPT has approved.

Some of these degrees are in chemistry-related disciplines, such as biochemistry and materials science, that NSF and NCES do not classify as chemistry. Those organizations consider biochemistry to be a biological science and materials science an engineering discipline. Also, CPT does not collect data on graduates from the schools, mostly small ones, it has not certified.

The population that ACS examines for its annual salary and employment survey of its domestic members are all chemists in the sense that they have at least a bachelor's degree in chemistry or a chemistry-related discipline. It is a requirement for society membership. And as they are society members, they presumably have an abiding interest in the science. But they don't all have a degree in a classic chemistry discipline, and they don't all actually work in chemistry.

Of course, not all chemists, however defined, are members of ACS. But ACS membership is the largest identifiable congregation of those involved in the science. As such, it provides the largest and best sample of members of the chemical profession. So, as long as its inherent limitations are kept in mind, ACS membership provides a reasonable basis for a survey to follow trends in the general welfare of working chemists in the U.S.

ists was from $130,000 to $55,000 and for Ph.D.s, from $166,000 to $76,500.

About all that can be said about chemists' salaries by geographic region is that they follow national trends and tend to be high on the East and West Coasts. For instance, the median salary for Ph.D.s exceeds $100,000 only in New England, the Middle Atlantic states, and the Pacific region.

Bonuses for chemists mostly go to those in industry. In general, such payments are a relatively small component of total compensation. In 2007, 75% of chemists in

ACADEMIC SALARIES

In academia, it pays to be a full professor

$ THOUSANDS	NINE-MONTH CONTRACTS: NON-PH.D. SCHOOL	NINE-MONTH CONTRACTS: PH.D. SCHOOL	11- TO 12-MONTH CONTRACTS: NON-PH.D. SCHOOL	11- TO 12-MONTH CONTRACTS: PH.D. SCHOOL
Full professor	$76.4	$110.0	$109.9	$131.2
Associate professor	58.6	75.8	72.5	77.9
Assistant professor	50.0	65.0	65.0	68.9
Instructor/adjunct	40.6	46.0	44.6	60.0
Research appointment	id	id	49.2	47.4

id = insufficient data to be meaningful. **SOURCE:** ACS salary survey 2007

PH.D. FACULTY SALARIES BY GENDER

Women's base salaries are reasonably comparable with those of men

$ THOUSANDS	MEN	WOMEN	WOMEN'S SALARIES AS % OF MEN'S
FULL PROFESSOR			
Bachelor's granting	$73.2	$78.2	107%
Master's granting	79.5	72.4	91
Ph.D. granting	111.4	101.5	91
ASSOCIATE PROFESSOR			
Bachelor's granting	58.0	56.5	97
Master's granting	65.0	id	id
Ph.D. granting	75.8	75.0	99
ASSISTANT PROFESSOR			
Bachelor's granting	49.0	49.5	101
Master's granting	54.0	id	id
Ph.D. granting	66.0	58.8	89

NOTE: Median salaries for nine- or 10-month contracts as of March 1, 2007. **id** = insufficient data to be meaningful.**SOURCE:** ACS salary survey 2007

INDUSTRIAL SALARIES BY WORK FUNCTION

R&D management pays the most, analytical work among the least

$ THOUSANDS	BACHELOR'S	MASTER'S	PH.D
RESEARCH			
Basic research	$62.7	$78.1	$105.0
Applied research	72.4	82.4	105.0
MANAGEMENT/SALES			
R&D management	98.0	112.5	140.0
General management	89.1	106.0	121.0
Marketing/sales	83.0	93.1	105.0
ANALYTICAL			
Analytical services	58.9	80.0	100.0
Production/quality control	65.0	80.0	102.1
OTHER			
Health/safety	83.5	92.0	124.5
Chemical information	id	id	95.8
Computers	id	id	100.0

NOTE: Median full-time base salaries. **id** = insufficient data to be meaningful.
SOURCE: ACS salary survey 2007

SALARIES OF ALL CHEMISTS BY EXPERIENCE

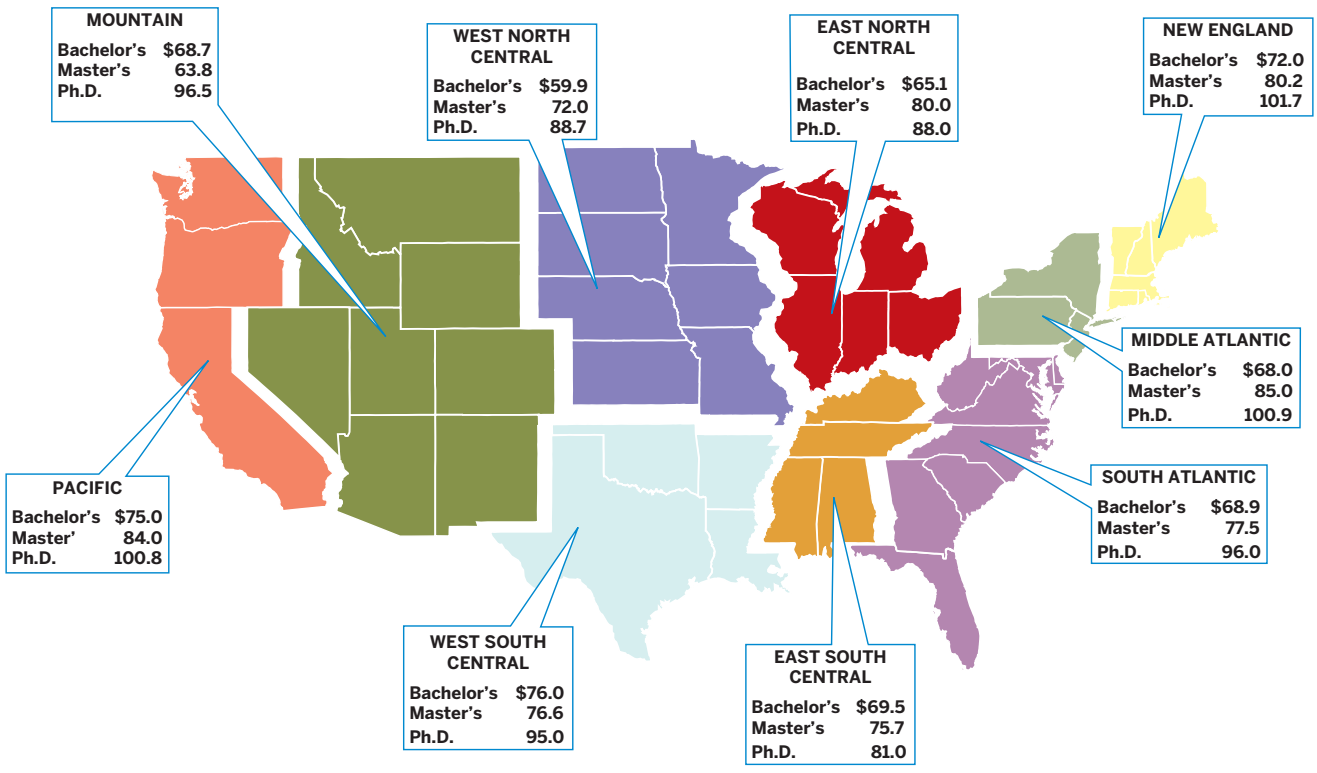
Chemists 50 years and older have median salary of $100,000 plus

$ THOUSANDS	YEARS SINCE BACHELOR'S DEGREE: 2–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40+	ALL[a]
ALL CHEMISTS	**$45.4**	**$57.0**	**$72.0**	**$82.0**	**$94.9**	**$100.0**	**$104.0**	**$100.0**	**$100.0**	**$88.0**
BY GENDER										
Men	47.3	60.0	75.0	83.8	97.0	102.0	107.5	103.0	103.0	92.8
Women	45.0	53.1	65.5	76.2	82.7	83.5	96.0	77.4	86.0	71.5
BY DEGREE										
Bachelor's	44.8	54.2	63.5	71.0	73.5	87.3	88.5	82.4	75.0	68.7
Master's	id	60.0	71.0	75.3	85.5	85.8	93.6	88.6	89.5	80.0
Ph.D.	id	59.0	75.4	88.9	100.0	105.6	115.0	106.0	104.0	96.8
BY EMPLOYER										
Industry	47.0	64.3	80.9	92.0	102.0	105.0	113.0	108.9	110.0	97.0
Government	id	57.0	73.0	85.0	88.7	92.5	107.4	105.0	107.0	90.0
Academia	38.5	45.0	53.0	58.0	61.5	73.6	80.0	77.1	91.5	65.4

NOTE: Median full-time salaries as of March 1, 2007. **a** Respondents giving their age. **id** = insufficient data to be meaningful. **SOURCE:** ACS salary survey 2007

CHEMIST'S SALARIES BY REGION

New England, Middle Atlantic, and Pacific states have salary edge



NOTE: Median full-time base salaries in thousands of dollars as of March 1, 2007. **SOURCE:** ACS salary survey 2007

SALARY SPREAD FOR INDUSTRIAL CHEMISTS

Top 10% of Ph.D.s approach $200,000 salaries

	YEARS SINCE BACHELOR'S DEGREE									
$ THOUSANDS	2–4	5–9	10–14	15–19	20–24	25–29	30–34	35–39	40+	ALL
BACHELOR'S										
90th percentile	$65.0	$75.0	$90.0	$100.0	$125.0	$130.1	$135.0	$128.0	$121.0	$112.0
75th	53.3	66.1	77.9	85.0	101.0	101.5	111.0	103.0	105.0	90.0
50th	45.4	55.0	65.0	72.5	76.1	90.0	91.5	82.4	77.0	70.7
25th	35.0	46.0	55.1	59.3	60.7	72.0	73.0	72.0	65.0	54.6
10th	32.0	37.5	50.0	52.5	50.0	57.6	56.0	52.0	50.8	41.6
MASTER'S										
90th percentile	na	84.4	93.0	114.0	148.0	130.0	138.4	137.5	150.0	130.0
75th	na	72.0	84.0	98.4	105.0	110.0	118.0	118.0	120.0	107.5
50th	na	61.8	75.0	80.0	92.5	92.5	98.0	100.3	97.7	88.0
25th	na	53.0	67.0	68.0	76.5	75.0	83.0	77.0	70.0	69.0
10th	na	47.0	58.0	50.4	65.0	56.0	59.0	67.1	50.0	55.0
PH.D.										
90th percentile	na	96.8	114.0	134.0	165.0	165.0	185.0	182.5	192.0	166.0
75th	na	90.0	101.9	116.5	133.2	143.2	152.6	149.5	150.0	135.0
50th	na	81.0	90.0	100.7	110.5	116.0	126.0	120.8	123.5	110.0
25th	na	74.0	80.6	89.0	97.0	100.0	107.0	97.5	93.0	92.0
10th	na	62.5	70.0	74.5	82.0	88.0	90.0	80.0	50.0	76.5

HOW TO READ THIS TABLE: Using the example of bachelor's degree chemists five to nine years after they have received their bachelor's degrees: The 10% best paid had a median base salary of $75,000, whereas the 10% worst paid had a median salary of $37,500. **na** = not applicable. **SOURCE:** ACS salary survey 2007

manufacturing indicated they were eligible for a bonus. Of these, 95% got one. Its median size was $10,000. Government is less generous, with 38% in that category eligible, 78% of these receiving, and a median of $1,900. Academics come in at 12% eligible, 81% of these receiving, and a median of $3,000.

Putting chemists in context with what had been happening to the employment situation in the U.S. in general for past dozen years is not easy. The data are complex and a multitude of factors are involved.

There is no question employment nationally has been on a roller coaster since 1995, with six years of rapid growth followed by about four years of decline and recovery and two years of renewed growth, which may today be on the wane.

U.S. population growth has held steady over these years at about 2.7 million per year for those 16 years and older and about 2.3 million per year for those 25 years and older.

Such growth demands a related steady growth in the number of domestic jobs just to maintain the status quo on the job market.

But the ability to generate jobs has definitely weakened. Chemists fall into the BLS category of "nonfarm payrolls." And BLS data on these payrolls are widely regarded as one of the better measures of employment. They

INDUSTRIAL SALARIES BY SIZE OF EMPLOYER

The bigger the better for chemists' pay

	SALARY ($ THOUSANDS)		
EMPLOYEES	BACHELOR'S	MASTER'S	PH.D.
Fewer than 50	$67.7	$75.0	$92.0
50–99	74.0	81.0	100.0
100–499	72.0	85.0	105.0
500–2,499	65.0	88.0	104.6
2,500–9,999	67.5	90.3	109.1
10,000–24,900	72.6	94.5	105.0
25,000 and up	79.7	89.0	120.0

NOTE: Median full-time base salaries. **SOURCE:** ACS salary survey 2007

BONUSES

Bonuses are largely a creature of industry

	INDUSTRY				
	MANUFACTURING	NONMANUFACTURING	GOVERNMENT	ACADEMIA	ALL
Eligible for bonus	75%	61%	38%	12%	51%
Percent of those eligible who received a bonus	95	89	89	81	92
Median bonus	$10,000	$5,200	$1,900	$3,000	$8,000

SOURCE: ACS salary survey 2007

U.S. NATIONAL EMPLOYMENT

Rate of growth for jobs nationally has dropped sharply since 2001 ...

MILLIONS	1995	2001	2007	CHANGE 1995–2001	CHANGE 2001–07
Civilian population (16 years +)					
Total	198.0	214.3	231.0	16.3%	16.7%
Civilian labor force (16 years +)					
Total	131.4	143.7	152.2	12.3	8.5
Employment level (16 years +)					
Total	123.9	137.2	145.3	13.3	8.1
Unemployment level (16 years +)					
Total	7.5	6.5	6.9	-1.0	0.4
Nonfarm payrolls					
Total	116.0	131.7	136.8	15.7	5.1
Total private employment[a]					
Total	97.4	111.6	115.4	14.2	3.8

... but for college graduates, the employment market has held up quite well

MILLIONS	1995	2001	2007	CHANGE 1995–2001	CHANGE 2001–07
Civilian population (25 years +)					
Total	165.7	179.7	193.7	14.0%	14.0%
College grads	38.2	46.8	55.6	8.6	8.8
Civilian labor force (25 years +)					
Total	110.6	121.6	130.6	11.6	9.0
College grads	31.1	37.2	43.5	6.1	6.3
Employment level (25 years +)					
Total	105.6	117.4	125.8	11.8	8.4
College grads	30.3	36.5	42.8	6.2	6.3
Unemployment level (25 years +)					
Total	5.0	4.3	4.8	-0.7	0.5
College grads	0.8	0.7	0.8	-0.1	0.1

NOTES: Data are as of March each year. **a** Seasonally adjusted. **SOURCE:** Bureau of Labor Statistics

grew by an average of 2.6 million per year from 1995 to 2001 but by only 800,000 per year from 2001 to 2007. Total private employment, another key BLS indicator, shows the same profile, up by 2.4 million annually from 1995 to 2001 and by about 650,000 annually from 2001 to 2007.

Two questions are key: Is the slow overall rate of job growth since 2001 not unexpected as this period includes the losses from the inevitable downturn that came in the aftermath of the exuberant job growth of the 1990s boom that ended in early 2001? Or is slower job growth chronic and due to such factors as the continued aging of the U.S. population; the downsizing of many domestic operations, especially manufacturing; the outsourcing of jobs overseas; other perturbations of globalization; or people just giving up on finding a job? Only time will tell.

However, an encouraging sign, especially for chemists, is the relatively strong and consistent workplace performance of college graduates in general. The number of those in the labor force who have at least a bachelor's degree in any subject and are at least 25 years old has risen very steadily from 31 million in 1995 to 37 million in 2001 and 44 million in 2007.

This trend quantifies the ongoing increase in the caliber of the U.S. workforce, something that is essential if this country is to remain competitive and economically strong. It also parallels the steady upgrade in the academic qualification of the U.S. chemical community. ■

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