Salaries

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Analysis of the
American Chemical Society's
1991 Survey of Salaries and Employment

American Chemical Society
Washington, D.C.

SALARIES 1991

ANALYSIS OF THE AMERICAN CHEMICAL SOCIETY'S 1991 SURVEY OF SALARIES AND EMPLOYMENT

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ACKNOWLEDGEMENTS

This report presents detailed results of the 1991 ACS Salary and Employment Status Survey. A summary of the survey findings was published in the July 15, 1991 issue of *Chemical and Engineering News*.

General oversight of the survey and its analysis was provided by the ACS joint Board-Council Committee on Economic Status, headed by Anne T. O'Brien[1], and by its subcommittee on surveys, chaired by John S.Connolly[2]. The committee expresses its gratitude to the approximately 9,900 members who provided a valuable service to the profession by completing the survey questionnaire.

Joan Burrelli and Alicia McGinnis of ACS Market and Business Analysis prepared this report. Dr. Burrelli wrote the summary and comment on the following pages.

Terrence R. Russell, Manager
Office of Professional Services

[1] Dr. Anne T. O'Brien, American Cyanamid, Medical Research Division, Pearl River, New York.

[2] Dr. John S. Connolly, Solar Energy Research Institute, Golden, Colorado.

SUMMARY AND COMMENT

Salaries

Salary increases for chemical engineers were better than those for chemists this year. BS chemical engineers' median salaries rose 5.3% to $52,000 this year, MS chemical engineers' salaries rose 3.6% to $57,000, and PhD chemical engineers' salaries rose 7.7% to $70,000. These are the largest increases for BS and PhD chemical engineers in several years.

Among chemists, overall median salaries showed modest increases over those of last year. As of March 1, 1991 median salaries for ACS member chemists were:

$58,000 for PhD,	up 5.5% from 1990,	up	0.8% in constant dollars
$47,400 for MS,	up 5.3% from 1990,	up	0.7% in constant dollars
$40,300 for BS,	up 3.3% from 1990,	down	1.2% in constant dollars

The Consumer Price Index rose 4.6% from March 1990 to March 1991.

With the exception of 1987, when salaries barely increased over those of the previous year, overall salaries for chemists have increased about six percent per year (in current dollars) since 1980 (see Figures 1 and 2). In constant dollars, median salaries of BS chemists have remained relatively unchanged and median salaries of PhD chemists have increased about 1% per year since 1980.

Chemists' Median Salaries *
(in current dollars)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
BS	25.0	27.5	28.5	30.0	30.9	32.0	33.0	33.5	35.4	37.0	39.0	40.3
MS	26.0	30.0	31.6	33.0	34.0	37.0	37.9	39.0	41.0	43.0	45.0	47.4
PhD	31.2	35.0	37.5	40.0	42.0	44.0	47.8	47.7	50.0	52.5	55.0	58.0

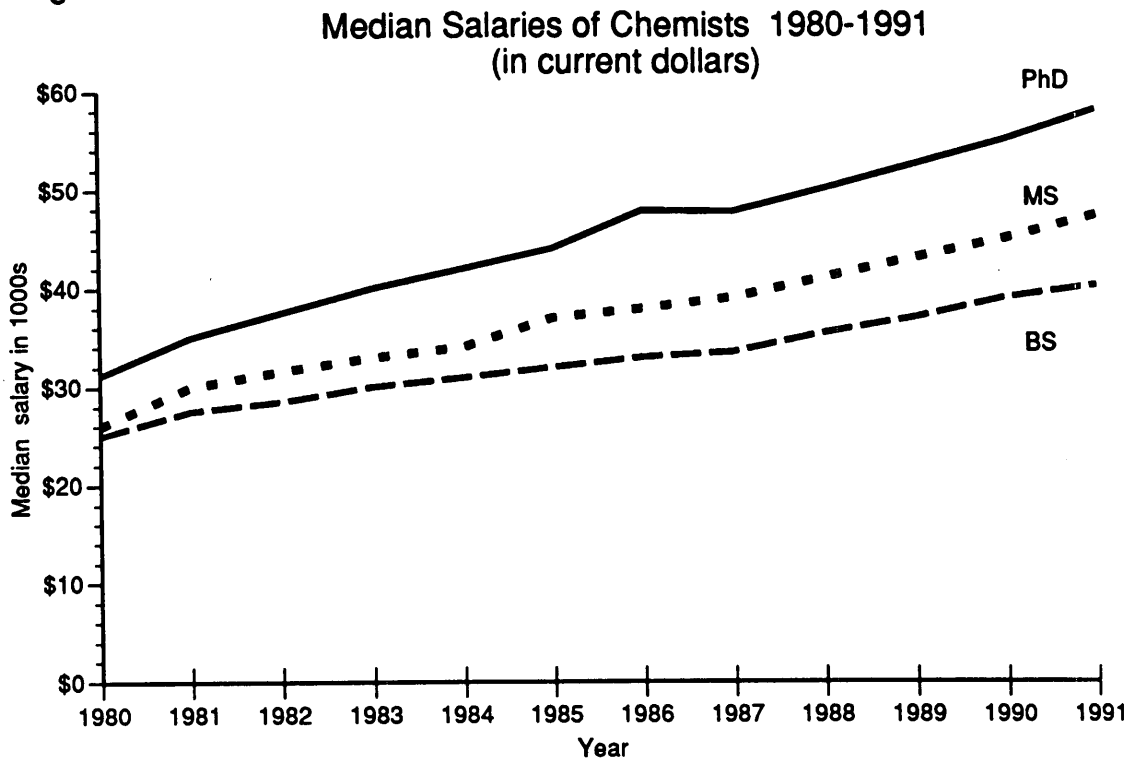
(in constant 1980 dollars)

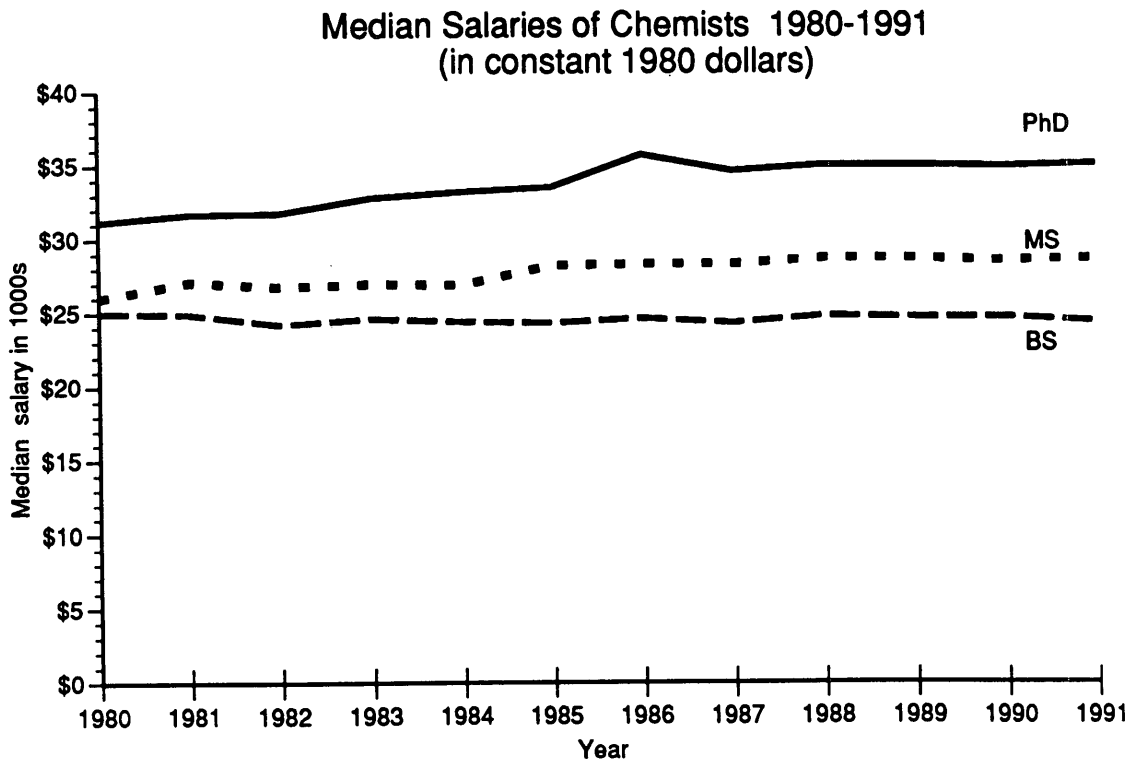
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
BS	25.0	24.9	24.2	24.6	24.4	24.3	24.6	24.3	24.8	24.7	24.7	24.4
MS	26.0	27.1	26.8	27.0	26.9	28.2	28.3	28.3	28.7	28.7	28.5	28.7
PhD	31.2	31.7	31.8	32.8	33.2	33.5	35.7	34.6	35.0	35.0	34.9	35.1

*Base annual salary in thousands of dollars

Source: ACS Salary Surveys

Figure 1

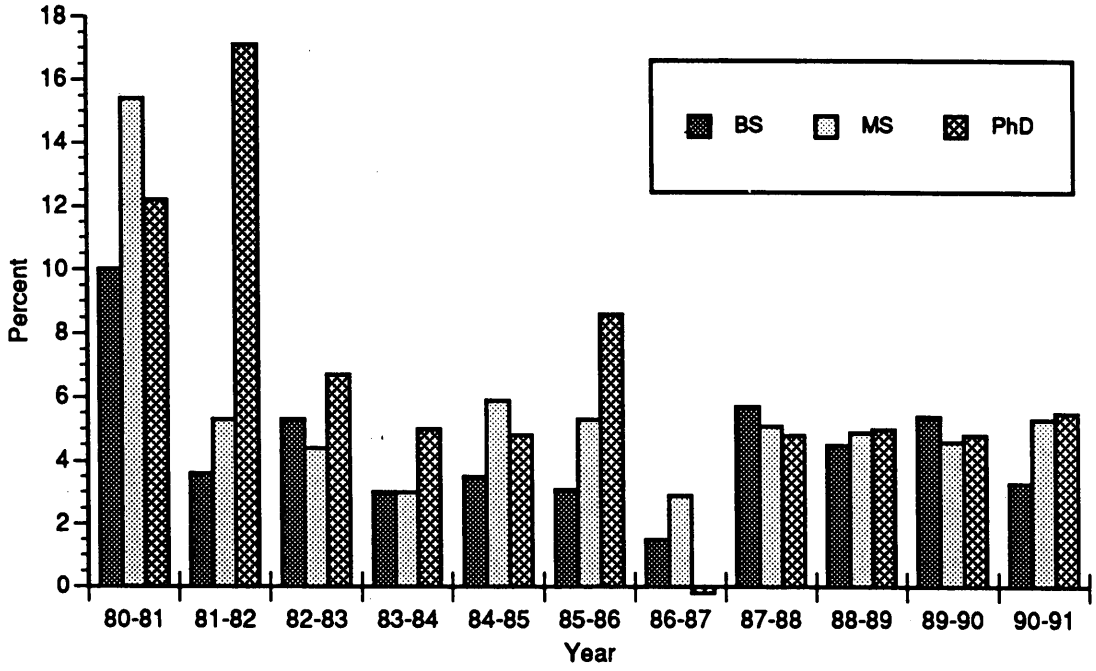




Source: ACS Salary Surveys

Figure 2

Changes in Chemists' Median Salaries 1980-1991



	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-88	88-89	89-90	90-91
BS	10.0	3.6	5.3	3.0	3.5	3.1	1.5	5.7	4.5	5.4	3.3
MS	15.4	5.3	4.4	3.0	5.9	5.3	2.9	5.1	4.9	4.6	5.3
PhD	12.2	17.1	6.7	5.0	4.8	8.6	-0.2	4.8	5.0	4.8	5.5

*Base annual salary on March 1 of the year (in thousands of dollars)

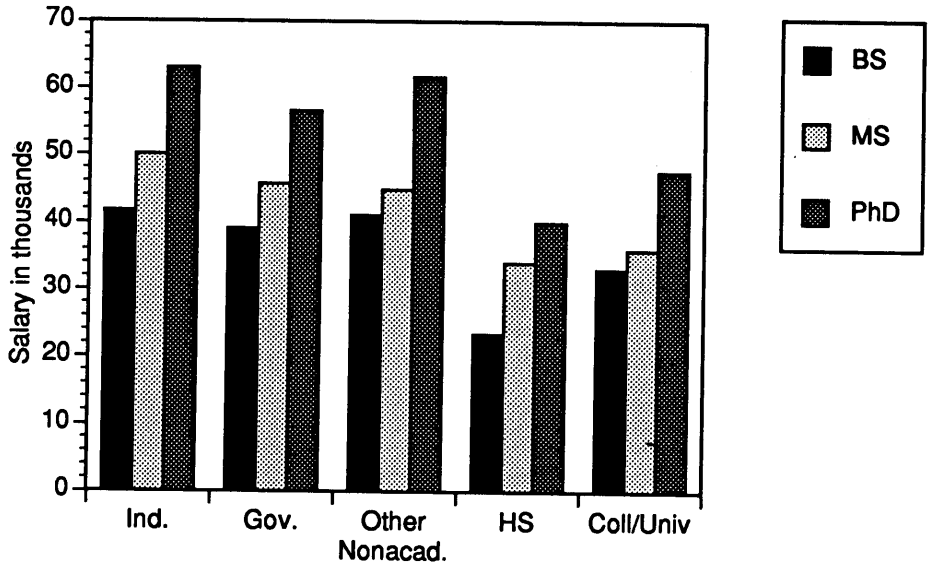
Source: ACS Salary Surveys

Salaries and Employer Type

Chemists' salaries tend to be highest in private industry and lowest in high schools. Although academic salaries have always been lower than those in industry or government, they have, in the past decade, increased faster than salaries in either industry or government. Salaries of PhD chemists in industry increased on average 7% per year from 1980 to 1991, those in government increased 6%, and those in academe increased 8%. For all employer types, PhD salary increases were highest in the early and later 1980s, and were lowest in the mid 80s. Median salary increases for PhD chemists this year were 6% for those employed in academe, 5% for those employed in industry, and 3% for those employed in government.

Figure 3

Median Salaries of Chemists
By Employer Type, 1991

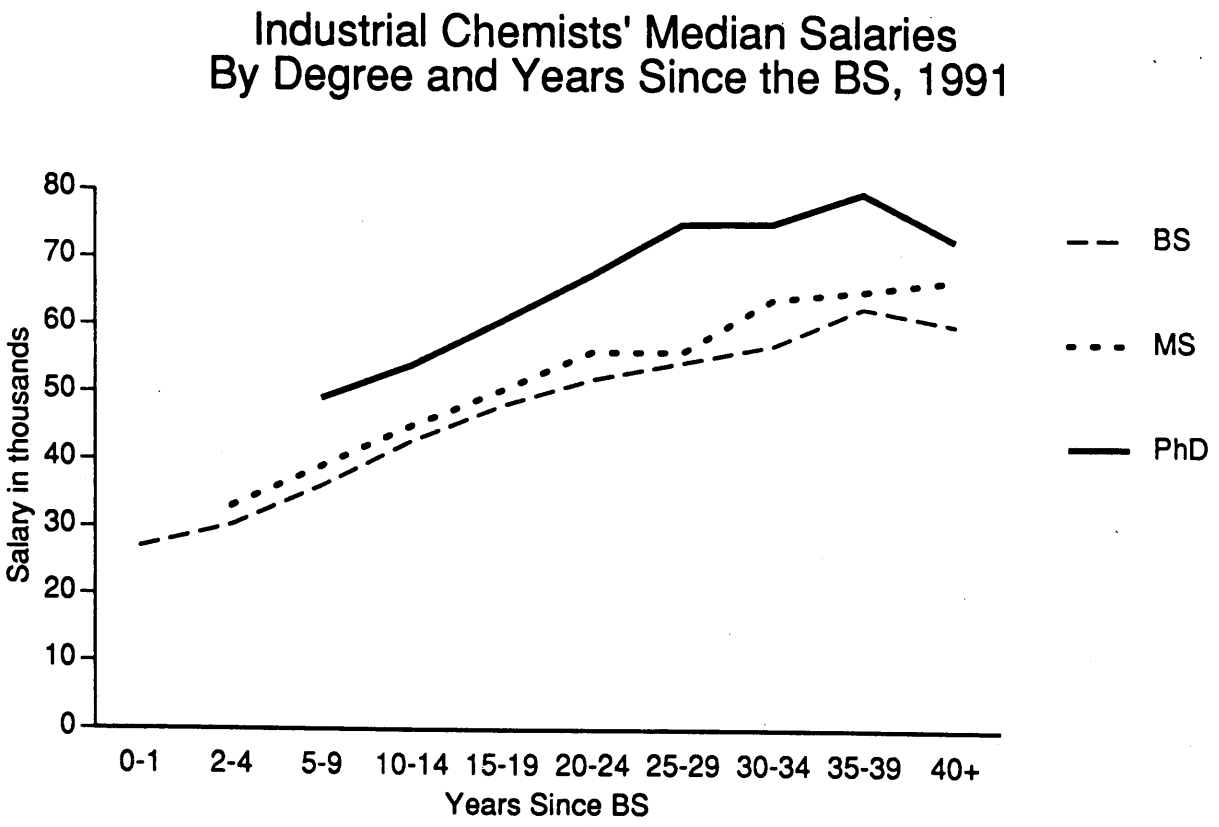


Source: ACS Salary Survey

Nonacademic Salaries

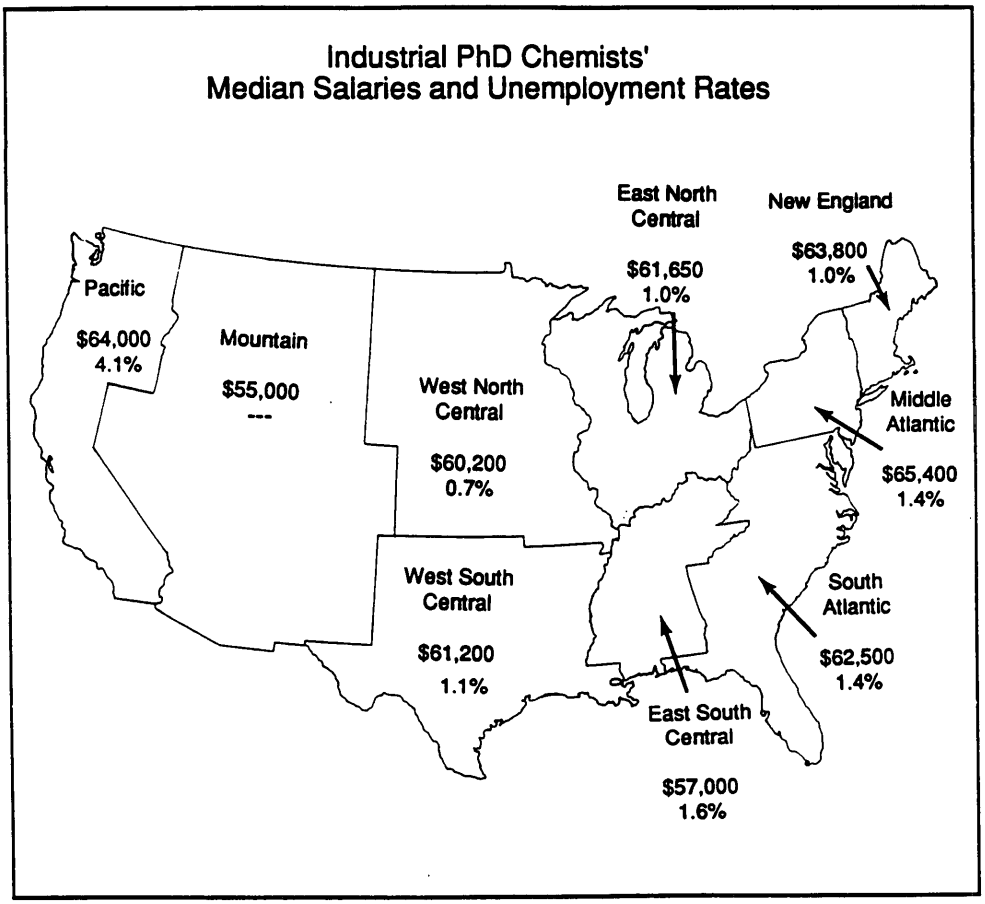
The greatest influences on nonacademic salaries are type of employer, length of experience, and degree of responsibility. Chemists employed in industry generally earn more than those employed in government or the service sector. Salaries also rise with increased experience and responsibility. Other influences on nonacademic salaries are type of industry (for industrial chemists) and work function. Salaries for chemists employed in industry are generally higher for those working in the petroleum industry and for those in management.

Figure 4



Source: ACS Salary Survey

Figure 5



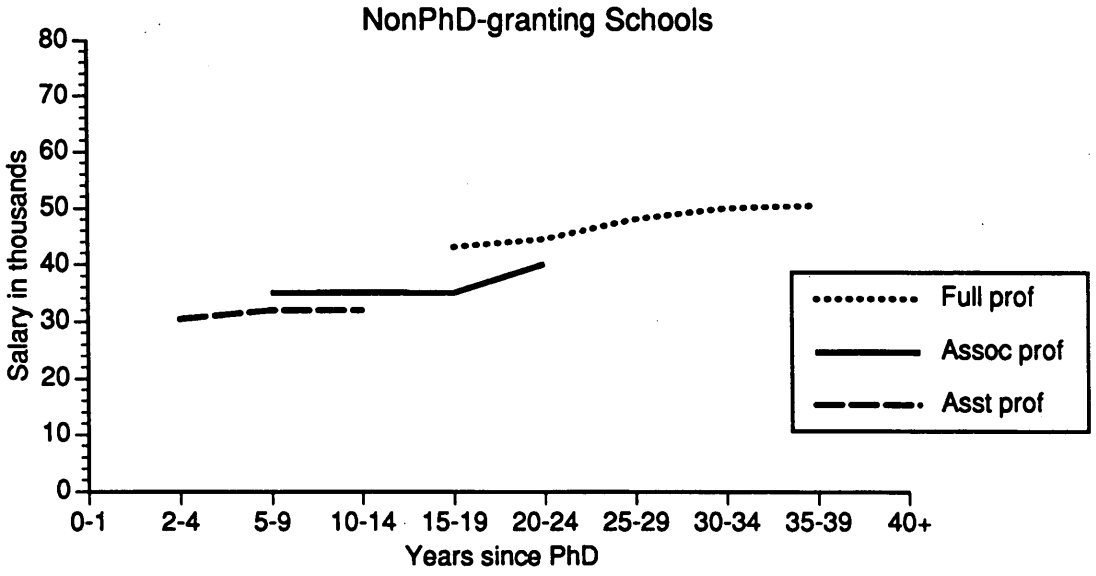
Salaries also differ by geographic region. The median salary of PhDs in industry ranged from a high of $65,400 in the Middle Atlantic region to a low of $55,000 in the Mountain region. Regional differences in salaries are largely a function of differences in length of experience and type of industry. Within categories of experience and within industries, salaries are fairly similar across regions. For example, among PhD chemists employed in the pharmaceuticals industry with 10-14 years since the BS, the median salary is $56,700 for those in the East North Central region and $58,000 for those in the Middle Atlantic and South Atlantic regions.

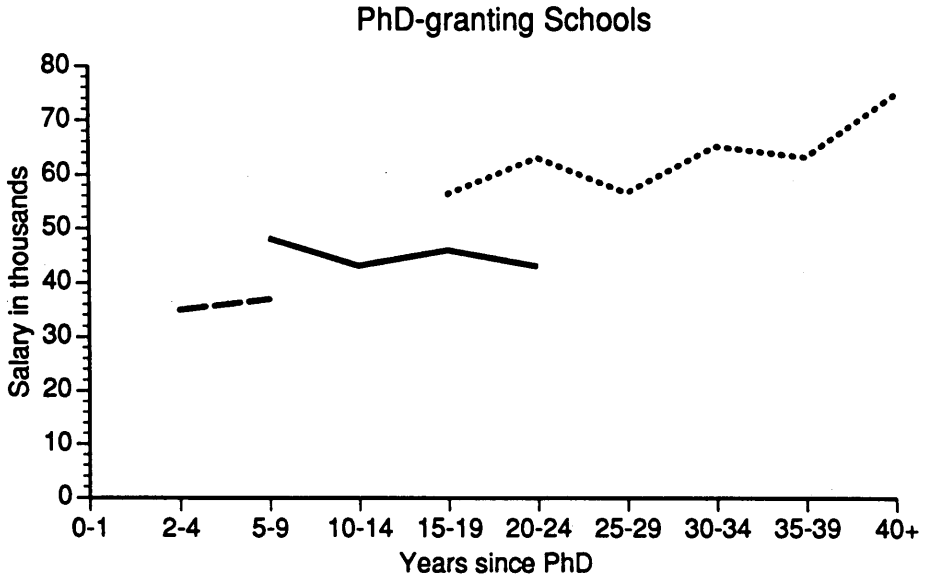
Academic Salaries

The greatest influences on academic salaries are academic rank, school type, and work function (e.g., teaching, administration). Academic salaries are generally higher for full professors, those in public institutions, those in departments granting PhD degrees, and those in research as opposed to teaching. Salaries of tenured faculty are somewhat higher than those of nontenured faculty. Within PhD-granting departments, salaries are higher in private schools than in public schools. Within BS-granting departments, salaries are higher in public schools than in private schools. For assistant and associate professors, length of experience has little influence on salaries. The median salary for PhD associate professors with 10-14 years since the BS and on 9 or 10 month contracts is $41,100; that for those with 25-29 years since the BS is $42,000.

Figure 6

Median Salaries of PhD Academic Chemists
By Rank and Years Since PhD, 1991
(9/10 Month Salaries)





Source: ACS Salary Survey

Salaries and Gender

Salaries for women chemists are generally lower than those for men. The median salary for women PhDs in industry is 85% of that for men. The difference in men's and women's median salaries is partly due to differences in experience. When length of experience is taken into account, the salary gap narrows. For example, the median salary for women PhDs in industry with 15-19 years since the BS is 97% of that for men with comparable experience. The difference in men's and women's median salaries can also be explained by differences in work function and responsibility, e.g., men are more likely than women to be in management.

Among academic chemists, the difference in men's and women's median salaries is partly due to differences in rank and partly due to differences in type of school. Women chemists in academia are less likely than men chemists to be full professors and are less likely than men chemists to be employed in PhD granting schools. The median salaries of men and women chemists with comparable rank and type of school are more nearly equal. For example, the median salary of PhD women full professors on 9 or 10 month contracts in PhD-granting schools is 94% of that for comparable men. Salaries for women assistant and associate professors on 9/10 month contracts in PhD-granting schools are equal to or higher than those for comparable men.

A more complete analysis of the salaries, employment status, and demographic characteristics of women chemists can be found in the ACS report *Women Chemists 1990.*

Employment and Unemployment

The economic situation for chemical engineers is better than that for chemists this year. The unemployment rate for chemical engineers is 1.3% this year, which is higher than last year's 1.0% (but still among the lowest in a decade) and which is lower than that for chemists. The unemployment rate for chemists is 1.6% this year, compared to only 1.1% last year. Unemployment among chemists has not been this high since 1986.

The percent of chemists experiencing extended periods of unemployment was up slightly. This year only 22% reported they had been unemployed for more than one year, last year about 19% had been unemployed that long.

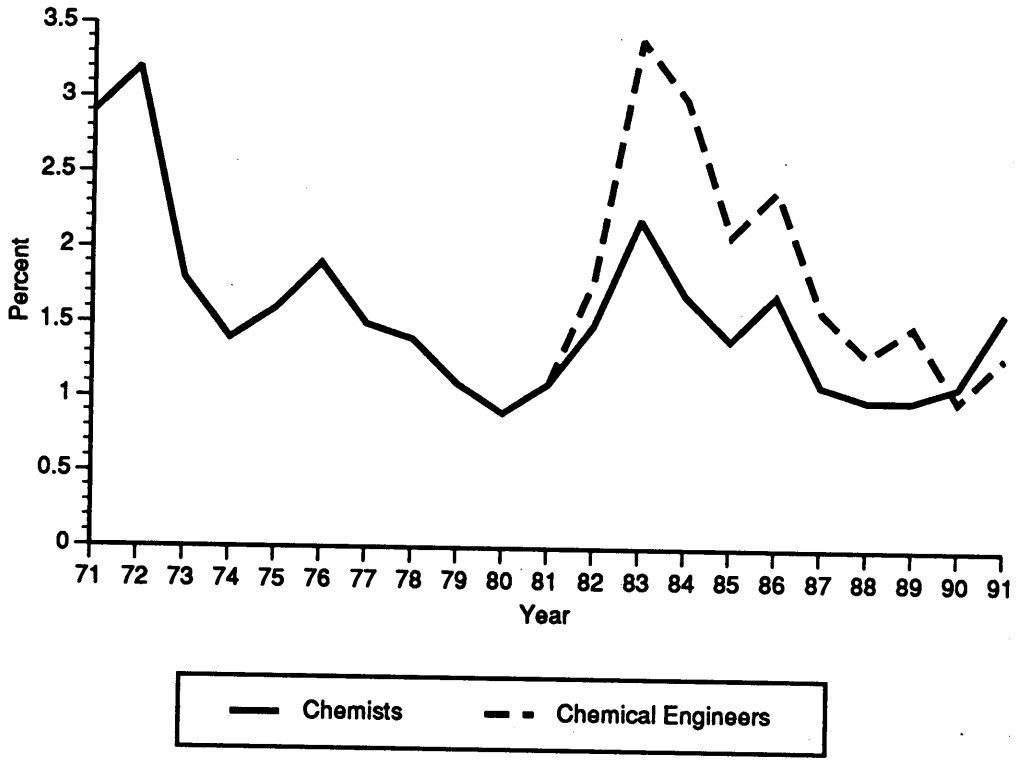
Of chemists in the labor force at the time of the survey, 3% had been unemployed at some time during 1990, the same as last year. More than half of these reported they were unemployed for three months or less in 1990.

Unemployment rates were higher for BS and MS chemists, for women, for industrial and "other nonacademic" chemists, and for either younger (35-39) or older (60-64) chemists. Chemists in industry and "other nonacademic" employment had higher rates of unemployment (1.7%) than chemists in any other type of employment: 1.0% for academic chemists, and 0.4% for government chemists. By region, the unemployment rate for chemists in the Pacific region is far higher (2.4%) than it is elsewhere.

Further information about this survey may be obtained from Joan Burrelli (202) 872-4433.

Figure 7

Unemployment Rates of Chemists and Chemical Engineers, 1971-1991



Source: ACS Salary Surveys

A METHOD FOR ESTIMATING AVERAGE SALARIES

A compact summary of the information in this report is possible through a statistical technique known as multiple regression. This technique identifies which characteristics have the greatest effect on salaries, and results in a formula for estimating the average salary of respondents with certain characteristics.

For industrial chemists and chemical engineers responding to the 1991 survey, the characteristics that account for most of the variation among salaries are highest degree, experience (years since B.S. is used to measure experience in ACS surveys), and either work function or number of subordinates. Chemical engineers salaries are influenced by whether one is in general management or R&D management. Chemists' salaries are influenced more by the number of subordinates.

Table I displays the factors needed to estimate the average salary for any group of respondents who are industrial chemists with any combination of the listed characteristics.

For example, to estimate the average salary in March 1991 for industrial chemists with the doctorate, 15 to 19 years of experience, and 3 to 9 subordinates, find the corresponding factors in Table I and multiply them together with the base salary for all industrial chemists:

($25,856) x (1.310) x (1.631) x (1.132) = $62,536

Table II displays the factors needed to estimate the average salary for chemical engineers. For example, to estimate the average salary in March 1991 for industrial chemical engineers with a bachelor's degree, 15 to 19 years of experience, and working in R&D management, find the corresponding factors in Table II and multiply them together with the base salary for all industrial chemical engineers:

($33,796) x (1.000) x (1.497) x (1.251) = $63,291

For academic chemists responding to the 1991 survey, the characteristics that account for most of the variation among salaries are rank, academic work function, length of contract (9 or 10 month or 11 or 12 month), and the highest degree offered by the respondent's department.

Table III displays the factors needed to estimate the average salary for any group of respondents who are PhD academic chemists employed full-time in colleges or universities with any combination of the listed characteristics.

For example, to estimate the average salary in March 1991 for academic chemists at the rank of full professor, engaged primarily in research, on 11 or 12 month contracts, and employed in PhD-granting departments, find the corresponding factors in Table III and multiply them together with the base salary for all academic chemists:

($30,890) x (1.672) x (1.085) x (1.315) x (1.158) = $85,333

Averages estimated using this method should be interpreted with caution, for two reasons. First, and more important, is that the relationship between salary and employment characteristics is not exact. Variations due to employer (such as size of company and geographic location), or to individual differences (such as ability and number of people supervised), and other characteristics prohibit perfect estimation of an individual's salary. Secondly, the factors shown in the tables are estimates derived from a sample of chemists rather than the entire population of chemists, and as such are subject to the imprecision associated with sampling procedures.

Table I

SALARY FACTORS FOR INDUSTRIAL CHEMISTS

BASE SALARY	$25,856
DEGREE:	
Bachelor's	1.000
Master's	1.078
Doctorate	1.310
MATURITY:	
(Years Since Receiving B.S.)	
0-1	1.000
2-4	1.117
5-9	1.301
10-14	1.507
15-19	1.631
20-24	1.783
25-29	1.891
30-34	1.967
35-39	2.063
40 or more	2.045
TOTAL SUBORDINATES:	
None	1.000
1 - 2	1.057
3 - 9	1.132
10 - 49	1.288
50 or more	1.715

Table II

SALARY FACTORS FOR INDUSTRIAL CHEMICAL ENGINEERS

BASE SALARY	$33,796
DEGREE:	
Bachelor's or Master's	1.000
Doctorate	1.216
MATURITY: (Years Since Receiving B.S.)	
0 - 4	1.000
5 - 9	1.234
10 - 14	1.416
15 - 19	1.497
20 - 24	1.732
25 - 29	1.856
30 - 34	1.992
35 - 39	2.087
40 or more	1.874
WORK FUNCTION:	
Non Management	1.000
R&D Management	1.251
General Management	1.391

Table III

SALARY FACTORS FOR ACADEMIC CHEMISTS

BASE SALARY	$30,890
RANK:	
Professor	1.672
Associate Professor	1.240
Assistant Professor	1.000
Non-faculty Research Associate	.842
WORK FUNCTION:	
Teaching	1.000
Research	1.085
Administration	1.190
LENGTH OF CONTRACT:	
9 or 10 month	1.000
11 or 12 month	1.315
HIGHEST DEGREE OFFERED IN DEPARTMENT:	
Bachelor's or Master's	1.000
Doctorate	1.158

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TECHNICAL NOTES

The target population of the 1991 Salary and Employment Status Survey was those ACS members who had U.S. mailing addresses, were not older than 70, and had neither student, retired, nor emeritus status. On January 31, 1991 the ACS membership totalled 136,044, of which approximately 89,000 met the above criteria for inclusion in the survey. The survey questionnaires were mailed to 17,000 of these members by bulk mail on February 22. By the May 21 cut-off date, 9,859 (58%) usable questionnaires had been returned. A follow-up mailing to nonresponders was sent on March 29.

Definitions

For the purposes of the survey analysis only, the following definitions were used:

Chemist:	A respondent who indicated a work specialty of chemistry or biochemistry (categories 2 through 15 of Part I, Question 3 on the questionnaire) or a non-chemistry work specialty (categories 16 through 19) and a degree field of chemistry or biochemistry.
Chemical Engineer:	A respondent who indicated a work specialty of chemical engineering or a degree field of chemical engineering (category 1 of Part I, Question 3 on the questionnaire).
Unemployed:	A respondent who is unemployed and seeking employment (category 4 of Part I, Question 4 on the questionnaire).

This report represents the respondents' principal annual salaries as of March 1, 1991. The respondent's age is given as of March 1, 1991. A respondent's geographic region refers to place of employment. A list of geographic regions and their member states is on page 24 of this report.

Proportions

The proportion of people falling within a certain cell in one of the tables is a sample proportion. The sample proportion is used to make statements about the corresponding population proportion, but, of course, the sample proportion generally is not exactly equal to the population proportion. A useful estimate of the representativeness of the sample proportion is the confidence interval. Such an interval estimate is illustrated in the following statement: "We assert with 95% confidence that the population proportion is between 0.04 and 0.06." A simple but adequate formula for a confidence interval centered on the sample proportion is

$$p\,(\text{lower}) = \hat{p} - z\,[\hat{p}(1 - \hat{p})/n]^{1/2}$$
$$\text{and } p\,(\text{upper}) = \hat{p} + z\,[\hat{p}(1 - \hat{p})/n]^{1/2}$$

where p (lower) = lower boundary of the interval
p (upper) = upper boundary of the interval
$\hat{p}$ = the sample proportion
z = a function of the level of confidence and is found in a table of the standard normal distribution.
n = the sample size

Inspection of the formula shows that the width of the confidence interval is inversely proportional to the square root of the sample size, so that proportions derived from small samples are not as precise as ones drawn from large samples. Also, if non-respondents differ from respondents with regard to the characteristics under consideration, the formula will overstate precision because the formula is based on assumption of 100% response.

Suppose a confidence interval is required for a group containing 1900 sample members. If the sample contains 95 persons with a specific characteristic, then the numbers that go into the formula are $p = 95/1900 = 0.05$ and $n = 1900$. For a 95% confidence interval, z is about 2. Putting these numbers into the formula above we have:

$$p(\text{lower}) = \hat{p} - z\,[\hat{p}(1 - \hat{p})/n]^{1/2}$$
$$= 0.05 - 2\,[0.05(0.95)/1900]^{1/2}$$
$$= 0.05 - 0.01$$
$$= 0.04$$

$$\text{and similarly, } p\,(\text{upper}) = 0.05 + 0.01$$
$$= 0.06$$

Thus, a 95% confidence interval for p is from 4.0% to 6.0%. Although we cannot say that the population proportion is exactly 5.0%, we can be confident that it is between 4.0% and 6.0%. The 95% level of confidence means roughly that if this procedure were followed a large number of times using different samples of the same size, the population proportion would be within the calculated interval about 95% of the time.

Means

As with proportions, confidence intervals may be constructed around the mean. The formula for a confidence interval around the sample mean is:

$$\bar{X} \pm Z\, s/(n)^{1/2}$$

where $\bar{X}$ = the sample mean
Z = a function of the level of confidence and is found in a table of the standard normal distribution
s = the sample standard deviation
n = the sample size

For example, in Table 1.1.1, the mean salary for a BS chemist who has 2-4 years experience and is employed in industry is $30,641, the standard deviation is 5,884 and the count is 188. For a 95% confidence interval, Z is about 2. Putting these numbers into the formula above, we have:

$$\$30{,}641 \pm 2\,(5884)/(188)^{1/2}$$
or $\$30{,}641 \pm \$858$

Thus, a 95% confidence interval for the mean is $29,783 to $31,499. The size of the confidence interval depends on the number of respondents and the standard deviation. A smaller count or a larger standard deviation will result in a larger confidence interval.

Medians

If a sample of size n is arranged in ascending order of magnitude, the median Md is given by the $((n + 1)/2)$th value. If $(n + 1)/2$ is not an integer, then the median is a weighted average of the two values whose ranks are closest to $(n + 1)/2$.

The median (the score that cuts the distribution in half) is generally a better measure of central tendency in salary distributions than the mean (the statistical average). Means are more likely than medians to be influenced by extremely high scores, which are typical in salary distributions.

The difference between the first quartile (the score below which one quarter of the case lie) and the third quartile (the score below which three quarters of the cases lie) is known as the interquartile range and is a measure of the variability in the distributions.

If the number of responses in a cell of a salary table is small, then the sample salary statistics for that cell may not accurately estimate the corresponding population salary statistics. In general, a cell containing fewer than 15 responses does not provide a useful estimate of the median salary, and a cell containing fewer than 25 responses does not provide a useful estimate of the 25th or the 75th salary percentile. For this reason, cells containing fewer than 15 responses were suppressed in the tables in this book.

Discrepancies Among Tables

Some pairs of tables contain totals that should be identical but are not. For example, two tables that represent information about PhD respondents should show the same total number of PhDs. They might, however, show different totals. To illustrate, if one table groups the PhDs according to specialty and other groups them according to geographic region, the totals will differ unless the number who did not indicate their specialty is the same as the number who did not indicate their geographic region.

Comparing Salaries

Often questions arise concerning B.S. chemists' salaries as compared with M.S. chemists', or women's salaries as compared with men's. These and similar comparisons require caution.

Statistical tests should be performed to determined whether observed differences in salaries of various sample groups could be mere chance occurrences resulting from peculiarities of the sample. Whether a difference in salaries is "statistically significant" depends not only on the magnitude of the difference but also on the sample size and the magnitude of the sample standard deviations.

Discussion of statistical tests of significance can be found in *Introductory Statistics for Business and Economics* by Thomas H. Wonnacott and Ronald J. Wonnacott, N.Y.: Wiley, 1990; and other similar texts.

Nonresponse Bias

The confidence intervals discussed earlier can estimate the amount of variability due to sampling error. Another source of error may be response bias. Members who did respond may be different from those who did not respond. The likelihood and extent of nonresponse bias is small. Comparisons between the survey responses and the ACS membership records show no bias in terms of age, sex, employer, or geographic region. In addition, a telephone follow-up of 100 nonresponders to last year's survey found that nonresponders' salaries were higher than those of responders to the survey, but that the difference was statistically insignificant. The employment status of the nonresponders was very similar to that of the responders.

Comparison of Survey Results and Membership Characteristics

	Salary Survey	Yearend 1990 Membership Records
Sex		
Male	81.6%	82.0%
Female	18.4	18.0
Age		
20 - 29	10.2	9.5
30 - 39	31.9	31.6
40 - 49	27.7	28.3
50 - 59	20.0	20.1
60+	10.2	10.4
Employer		
Industrial	61.8	60.0
Government	7.9	8.0
Other	5.8	6.9
Academic	24.5	25.1
Region		
Pacific	12.2	12.5
Mountain	4.7	3.9
West North Central	6.2	5.9
West South Central	7.5	7.6
East North Central	19.2	19.1
East South Central	3.7	3.5
Middle Atlantic	22.1	23.7
South Atlantic	6.6	16.2
New England	7.7	7.6

Note: Both survey results and membership characteristics refer to full and associate members who are less than 71 years old and who are living in the U.S.

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

Table 1.1.1

SALARIES of BS CHEMISTS employed FULL-TIME
by EMPLOYER TYPE and YEARS SINCE BS
1991 ACS Salary Survey

TYPE OF EMPLOYER & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Industry						
Total	1540	46,452	25,219	33,000	41,700	53,000
0-1	44	27,701	6,429	23,900	27,000	30,000
2-4	188	30,641	5,884	26,050	30,150	34,300
5-9	371	37,178	10,659	31,000	36,000	41,000
10-14	291	45,046	13,807	37,200	42,700	50,000
15-19	205	49,729	15,476	39,700	48,000	58,000
20-24	126	53,888	16,237	43,000	51,909	61,000
25-29	102	57,425	22,105	44,500	54,400	65,000
30-34	103	61,606	26,733	45,870	57,000	70,000
35-39	59	77,963	71,332	49,000	62,500	78,000
40 or more	51	75,848	51,256	50,000	60,000	82,000
Government						
Total	169	40,322	12,168	31,366	39,000	48,000
2-4	16	28,744	5,265	24,359	29,750	31,827
5-9	24	31,120	5,755	27,000	30,548	35,100
10-14	31	36,919	7,281	32,000	37,000	44,000
15-19	24	44,193	8,391	38,438	42,630	49,470
20-24	19	47,617	10,971	35,900	47,000	57,000
25-29	18	45,459	13,685	35,000	44,925	57,000
30-34	17	47,807	10,322	41,000	48,800	54,500
Other Nonacademic						
Total	77	51,320	30,895	31,500	41,000	65,000
High School						
Total	27	25,715	7,499	20,000	23,300	30,000
College or University						
Total	48	34,024	14,801	24,500	33,016	39,500

Note: Cells 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
1991 ACS Salary Survey

TYPE OF EMPLOYER & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Industry						
Total	1007	54,207	20,638	41,125	50,000	63,000
2-4	17	34,937	6,065	31,000	33,000	38,400
5-9	136	39,222	7,930	34,550	39,000	43,275
10-14	213	47,712	11,930	40,560	45,000	53,000
15-19	190	52,342	14,656	44,000	50,280	60,000
20-24	165	58,744	17,172	48,000	56,020	67,000
25-29	105	59,249	22,776	46,000	56,025	70,000
30-34	71	67,006	24,320	49,000	63,800	78,500
35-39	69	70,395	28,031	54,000	65,000	76,068
40 or more	40	74,796	36,407	53,123	66,697	82,300
Government						
Total	116	46,868	13,089	36,482	45,749	55,000
5-9	16	35,109	4,851	31,456	35,500	37,647
10-14	15	40,110	9,272	33,190	38,500	48,000
15-19	20	46,408	11,494	39,000	45,811	54,500
20-24	18	46,546	8,847	40,000	47,407	50,300
30-34	20	52,991	10,251	48,241	54,100	62,086
Other Nonacademic						
Total	85	47,210	22,422	33,000	44,750	54,000
High School						
Total	63	35,285	9,936	26,000	34,000	42,947
25-29	17	37,115	10,095	30,000	38,000	43,651
College or University						
Total	123	36,919	12,398	28,440	36,000	44,200
20-24	25	34,206	7,283	29,000	36,000	40,000
25-29	24	38,198	9,145	32,450	36,250	46,004
30-34	15	43,041	10,505	36,000	46,310	52,000
35-39	16	35,873	10,895	28,970	37,500	44,447

Note: Cells 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
1991 ACS Salary Survey

TYPE OF EMPLOYER & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Industry						
Total	2414	68,626	27,673	53,000	63,000	76,140
5-9	229	49,153	6,128	46,000	49,100	52,500
10-14	469	55,607	9,444	50,000	53,900	60,000
15-19	411	62,166	12,441	54,000	60,500	68,000
20-24	384	70,408	17,683	59,450	67,530	78,110
25-29	405	80,865	34,210	63,500	74,900	90,000
30-34	234	82,330	33,232	64,000	75,000	91,000
35-39	179	87,602	48,164	66,780	79,500	96,000
40 or more	102	78,326	32,665	61,800	72,500	83,811
Government						
Total	332	59,391	17,588	47,000	56,559	70,000
5-9	16	43,653	8,308	37,000	44,800	48,805
10-14	36	46,269	10,038	38,169	45,998	55,050
15-19	40	48,290	8,618	42,500	45,900	52,277
20-24	54	58,995	17,757	48,600	58,000	65,753
25-29	70	61,077	14,574	52,000	59,372	70,000
30-34	42	65,412	15,638	55,800	65,658	77,000
35-39	45	67,818	20,403	54,800	67,000	80,000
40 or more	29	74,545	17,465	60,000	79,500	80,138
Other Nonacademic						
Total	193	66,794	30,441	50,000	61,700	80,000
10-14	18	46,657	11,906	40,000	43,250	51,000
15-19	26	61,163	23,550	42,500	60,000	68,000
20-24	38	67,659	35,499	51,000	62,250	82,200
25-29	33	70,832	28,597	55,000	64,000	76,500
30-34	30	70,654	34,301	50,000	64,750	80,000
35-39	21	82,099	31,205	60,000	70,000	94,000
40 or more	20	70,511	29,050	53,000	70,000	91,000
High School						
Total	16	40,603	15,657	32,575	40,000	44,000
College or University						
Total	1566	52,285	21,709	37,370	47,560	61,000
5-9	81	32,749	7,681	29,000	32,000	37,000
10-14	192	37,667	10,051	31,000	37,200	42,868
15-19	203	43,691	14,613	34,500	41,500	49,000
20-24	203	49,665	19,694	36,000	46,000	57,104
25-29	294	54,891	20,764	41,000	50,000	66,800
30-34	233	59,110	19,416	45,000	56,000	70,000
35-39	207	61,245	20,474	47,277	56,120	72,720
40 or more	151	68,727	29,756	49,700	61,200	85,000

Note: Cells 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
1991 ACS Salary Survey

HIGHEST DEGREE & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BS						
Total	1540	46,452	25,219	33,000	41,700	53,000
0-1	44	27,701	6,429	23,900	27,000	30,000
2-4	188	30,641	5,884	26,050	30,150	34,300
5-9	371	37,178	10,659	31,000	36,000	41,000
10-14	291	45,046	13,807	37,200	42,700	50,000
15-19	205	49,729	15,476	39,700	48,000	58,000
20-24	126	53,888	16,237	43,000	51,909	61,000
25-29	102	57,425	22,105	44,500	54,400	65,000
30-34	103	61,606	26,733	45,870	57,000	70,000
35-39	59	77,963	71,332	49,000	62,500	78,000
40 or more	51	75,848	51,256	50,000	60,000	82,000
MS						
Total	1007	54,207	20,638	41,125	50,000	63,000
2-4	17	34,937	6,065	31,000	33,000	38,400
5-9	136	39,222	7,930	34,550	39,000	43,275
10-14	213	47,712	11,930	40,560	45,000	53,000
15-19	190	52,342	14,656	44,000	50,280	60,000
20-24	165	58,744	17,172	48,000	56,020	67,000
25-29	105	59,249	22,776	46,000	56,025	70,000
30-34	71	67,006	24,320	49,000	63,800	78,500
35-39	69	70,395	28,031	54,000	65,000	76,068
40 or more	40	74,796	36,407	53,123	66,697	82,300
PhD						
Total	2414	68,626	27,673	53,000	63,000	76,140
5-9	229	49,153	6,128	46,000	49,100	52,500
10-14	469	55,607	9,444	50,000	53,900	60,000
15-19	411	62,166	12,441	54,000	60,500	68,000
20-24	384	70,408	17,683	59,450	67,530	78,110
25-29	405	80,865	34,210	63,500	74,900	90,000
30-34	234	82,330	33,232	64,000	75,000	91,000
35-39	179	87,602	48,164	66,780	79,500	96,000
40 or more	102	78,326	32,665	61,800	72,500	83,811

Note: Cells 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
1991 ACS Salary Survey

HIGHEST DEGREE & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BS						
Total	1113	50,153	27,933	36,000	45,120	58,000
0-1	22	29,658	7,541	24,000	28,400	35,200
2-4	103	31,627	6,644	26,400	32,000	36,000
5-9	240	38,589	11,944	31,665	36,450	42,000
10-14	209	46,526	14,607	38,000	44,964	51,000
15-19	160	51,548	15,954	40,000	49,300	59,250
20-24	100	56,063	16,449	45,330	53,402	65,000
25-29	84	60,996	22,057	48,000	57,850	67,000
30-34	93	63,338	27,186	48,000	58,260	71,000
35-39	55	79,951	72,751	51,000	63,000	78,000
40 or more	47	77,873	52,712	53,000	61,680	84,000
MS						
Total	794	56,238	21,427	43,000	52,000	65,000
5-9	92	40,136	8,727	35,000	39,264	44,625
10-14	154	48,831	11,745	41,500	46,830	55,000
15-19	156	53,539	14,978	45,000	51,600	62,600
20-24	133	59,938	17,197	49,800	57,000	68,000
25-29	87	60,375	24,131	46,000	56,000	71,500
30-34	60	69,077	24,301	52,500	67,200	79,750
35-39	65	70,716	27,734	54,600	66,960	76,068
40 or more	36	75,972	37,215	57,400	67,000	82,300
PhD						
Total	2169	69,760	28,222	54,000	64,000	77,700
5-9	174	49,511	5,695	46,000	49,950	52,500
10-14	394	55,795	9,458	50,000	53,700	60,000
15-19	365	62,380	12,248	54,587	60,720	68,500
20-24	357	70,962	17,765	60,000	68,000	79,600
25-29	390	81,089	34,209	64,000	75,000	90,000
30-34	217	83,259	33,812	65,000	75,000	91,000
35-39	172	88,741	48,723	68,420	80,000	96,192
40 or more	99	76,762	29,588	61,600	72,000	83,000

Note: Cells 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
1991 ACS Salary Survey

HIGHEST DEGREE & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BS						
Total	426	36,791	11,492	29,000	34,500	42,200
0-1	22	25,743	4,441	23,800	26,500	28,827
2-4	85	29,445	4,564	26,000	29,600	32,000
5-9	130	34,535	7,117	30,000	34,000	39,050
10-14	82	41,276	10,703	34,600	40,000	48,000
15-19	45	43,262	11,656	35,700	42,000	48,900
20-24	26	45,523	12,451	34,500	44,050	54,000
25-29	18	40,757	13,054	31,000	41,050	49,872
MS						
Total	213	46,638	15,191	36,000	43,830	53,800
5-9	44	37,311	5,541	33,830	37,500	41,750
10-14	59	44,792	12,014	38,000	44,000	50,000
15-19	34	46,851	11,774	40,000	46,850	53,760
20-24	32	53,782	16,404	42,006	51,100	64,960
25-29	18	53,805	13,781	45,000	56,813	61,000
PhD						
Total	245	58,581	19,582	48,960	54,540	63,500
5-9	55	48,021	7,277	45,200	48,000	52,000
10-14	75	54,616	9,372	49,700	54,540	59,700
15-19	46	60,470	13,915	52,000	59,000	65,000
20-24	27	63,073	14,998	54,000	62,400	67,400
25-29	15	75,032	34,910	50,934	63,000	85,000
30-34	17	70,464	22,086	53,000	65,232	80,000

Note: Cells 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
1991 ACS Salary Survey

WORK SPECIALTY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Biochem/Biotech						
Total	54	47,211	27,736	31,000	38,250	53,000
General chemistry						
Total	78	50,967	58,682	30,500	42,000	55,000
5-9	20	34,521	9,420	28,245	35,250	38,775
10-14	15	40,325	11,928	29,640	42,000	43,000
Agricultural chemistry						
Total	42	46,036	19,883	33,500	42,750	50,000
Analytical chemistry						
Total	493	41,603	14,843	31,600	39,000	48,334
0-1	22	27,491	7,431	22,672	27,000	30,000
2-4	69	30,212	5,490	26,000	30,200	34,500
5-9	110	35,551	12,668	29,600	34,250	38,000
10-14	95	42,310	9,326	37,000	41,650	48,000
15-19	61	46,879	13,763	37,330	46,190	54,000
20-24	50	48,972	12,712	41,750	48,000	54,500
25-29	29	51,228	15,524	42,000	50,000	59,400
30-34	32	51,723	13,253	42,393	50,500	60,000
35-39	18	58,165	23,377	43,000	52,000	70,000
Environmental chemistry						
Total	206	42,350	18,461	30,000	38,000	48,500
2-4	32	30,645	7,173	26,000	29,750	34,500
5-9	73	38,330	12,418	29,350	36,500	45,000
10-14	40	45,455	20,028	33,200	41,000	48,350
15-19	28	48,798	15,632	37,830	48,300	55,250
Inorganic chemistry						
Total	34	48,100	16,661	37,100	44,000	61,765
Materials science						
Total	57	52,376	20,674	39,000	49,700	63,000
Medicinal-Pharmaceutical						
Total	64	43,491	18,051	33,000	38,800	48,600
5-9	19	34,712	5,891	31,000	34,000	38,900
Organic chemistry						
Total	138	50,462	28,130	34,200	45,825	57,650
2-4	15	30,467	4,380	28,800	30,517	34,100
5-9	27	35,325	5,037	31,600	34,800	38,000
10-14	18	45,215	6,919	42,000	45,890	51,000
15-19	21	54,902	16,688	43,500	51,000	63,000
25-29	16	65,974	37,650	49,375	60,504	65,600

Table 2.2.1 (continued)

WORK SPECIALTY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Physical chemistry						
Total	28	53,740	21,008	39,490	50,500	56,270
Polymer chemistry						
Total	181	49,942	30,569	35,300	44,700	56,490
2-4	25	32,673	7,404	27,493	31,500	36,300
5-9	53	39,026	8,152	32,700	37,000	44,400
10-14	33	46,022	13,572	38,000	46,000	52,000
15-19	16	46,219	11,512	36,400	44,600	55,000
Other chemical science						
Total	49	44,860	15,623	36,000	42,800	52,000
Business Administration						
Total	37	63,203	24,127	44,100	61,000	75,250
Computer science						
Total	20	50,267	20,896	33,460	45,000	67,650
Other nonchemistry						
Total	73	55,782	30,068	38,700	48,000	64,000
5-9	19	43,355	11,861	36,000	39,600	48,000
10-14	17	45,468	13,685	38,000	42,000	46,671

Note: Cells 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
1991 ACS Salary Survey

WORK FUNCTION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
R&D Mgt						
Total	103	65,538	29,698	47,000	60,250	75,000
10-14	18	59,888	20,960	48,600	52,500	64,500
15-19	22	66,515	21,405	47,000	64,500	84,000
Basic research						
Total	90	38,504	10,148	32,000	36,000	46,500
2-4	21	30,185	4,218	26,100	31,550	33,450
5-9	25	33,964	4,454	31,100	34,000	37,000
10-14	18	43,044	11,681	34,600	40,000	48,000
Applied research						
Total	406	43,387	12,864	33,900	42,000	50,300
0-1	16	28,913	6,343	24,500	28,000	30,250
2-4	51	32,681	6,014	28,368	32,000	35,300
5-9	102	36,606	7,111	32,000	35,350	41,110
10-14	77	44,508	8,650	39,000	45,000	50,000
15-19	55	46,653	9,787	39,780	46,800	55,000
20-24	27	51,843	17,685	40,800	50,851	60,000
25-29	24	56,463	9,907	48,189	59,904	63,300
30-34	25	52,076	14,321	43,500	49,500	59,980
35-39	15	56,573	15,677	45,200	59,100	66,600
General Mgt						
Total	173	66,018	53,861	42,000	53,700	70,000
5-9	45	44,663	14,256	33,000	42,000	52,000
10-14	33	57,145	20,270	42,000	51,000	66,000
15-19	27	53,421	10,899	47,000	54,000	63,000
30-34	15	91,144	51,851	56,000	64,000	128,000
Marketing						
Total	128	48,295	16,516	36,000	43,230	60,000
5-9	29	40,710	12,087	33,300	37,750	44,700
10-14	21	46,085	11,986	40,000	43,460	50,000
15-19	19	48,224	14,288	38,000	42,500	60,000
Production						
Total	309	39,742	13,892	30,000	38,000	47,500
0-1	16	26,162	6,987	21,836	25,500	29,250
2-4	43	29,420	5,441	25,500	28,800	32,500
5-9	74	33,576	7,544	28,200	34,000	39,050
10-14	57	38,520	8,440	31,000	39,500	43,000
15-19	32	43,971	11,714	37,125	42,000	49,350
20-24	31	49,353	12,067	41,000	51,000	60,000
30-34	27	55,296	15,625	44,000	51,000	68,000

Table 2.2.2 (continued)

WORK FUNCTION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Health & Safety						
Total	84	49,781	16,465	39,078	46,000	58,000
10-14	15	44,270	9,072	39,156	42,888	46,800
15-19	15	51,536	9,935	46,000	52,000	58,000
Other lab analysis						
Total	138	34,497	12,234	27,500	32,500	38,000
2-4	29	26,879	5,921	22,505	26,000	29,900
5-9	45	34,218	15,274	28,454	32,500	35,200
10-14	21	35,938	6,697	32,500	35,000	39,900
Consulting						
Total	35	42,779	16,660	30,000	37,000	52,000
Other						
Total	85	46,583	18,289	34,725	40,000	51,500
5-9	20	38,064	8,617	33,250	36,000	39,750
10-14	25	45,537	12,982	38,000	45,000	51,000

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

Table 2.2.3

SALARIES of BS CHEMISTS employed FULL-TIME
by INDUSTRY and YEARS SINCE BS
1991 ACS Salary Survey

INDUSTRY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Analytical service lab						
Total	171	38,054	16,379	27,500	34,500	46,000
2-4	31	28,700	7,384	22,505	27,400	32,000
5-9	74	36,598	16,464	27,900	32,000	38,000
10-14	28	45,381	21,482	32,250	39,250	49,750
15-19	20	42,481	12,692	34,000	43,675	49,300
Contract research firm						
Total	24	41,382	18,748	30,000	36,050	46,500
Utility						
Total	41	48,385	20,763	37,000	43,000	54,500
Other nonmanufacturing						
Total	89	48,060	29,235	30,600	41,330	50,000
5-9	25	43,194	12,927	36,500	41,300	48,000
10-14	19	49,653	15,087	40,000	47,000	63,000
Aerospace						
Total	40	48,671	19,687	36,200	43,750	59,520
Basic chemicals						
Total	53	58,680	68,736	39,000	45,000	60,000
Specialty chemicals						
Total	198	47,430	19,406	35,000	43,750	54,000
2-4	25	30,421	5,828	25,000	31,100	34,100
5-9	48	37,040	5,718	34,500	38,000	40,500
10-14	33	44,763	8,608	40,000	46,600	49,500
15-19	21	52,942	15,267	43,500	50,000	58,000
20-24	18	60,890	21,409	51,000	56,652	67,000
25-29	18	56,664	11,957	48,852	54,650	67,000
Agricultural chemicals						
Total	31	43,079	14,666	31,000	40,000	52,000
Coatings						
Total	84	51,560	37,899	35,000	44,400	56,000
5-9	23	39,550	9,731	33,500	36,000	45,000
10-14	15	41,571	7,041	38,000	42,500	48,000
Electronics						
Total	44	47,685	14,056	36,084	48,000	60,000
Food						
Total	49	46,545	20,921	32,500	40,800	53,000
Glass						
Total	16	48,585	18,873	32,100	43,325	58,500

Table 2.2.3 (continued)

INDUSTRY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Instruments						
Total	39	52,406	20,157	35,000	47,700	65,000
Medical devices						
Total	51	42,779	13,124	32,000	41,000	50,000
5-9	17	38,512	7,992	32,400	36,800	43,500
Metals						
Total	27	40,692	11,853	32,600	37,600	45,000
Paper						
Total	21	42,082	17,069	28,100	40,000	50,000
Petroleum						
Total	62	53,454	26,386	38,400	48,000	60,000
15-19	18	50,071	12,982	42,000	48,000	54,000
Pharmaceuticals						
Total	238	43,304	15,823	32,500	39,500	48,900
2-4	40	31,561	3,943	28,200	32,000	34,000
5-9	54	35,859	4,727	32,500	35,275	39,000
10-14	51	43,567	10,898	37,680	41,000	48,000
15-19	31	51,046	14,034	42,240	49,000	59,000
20-24	18	50,273	15,966	42,300	46,494	57,000
25-29	17	65,440	24,097	48,000	62,900	75,000
Plastics						
Total	47	57,056	34,673	35,400	52,000	59,540
Rubber						
Total	39	50,137	15,031	38,000	50,000	59,820
Soaps						
Total	19	49,219	41,437	30,000	35,000	59,400
Other manufactures						
Total	171	45,358	20,836	35,500	42,000	51,000
2-4	17	31,969	6,599	26,800	32,900	36,750
5-9	37	36,434	9,864	29,500	36,000	45,000
10-14	35	44,573	16,503	36,000	41,000	46,800
15-19	21	46,715	10,244	40,000	45,000	58,000
20-24	15	49,912	12,352	41,500	49,300	56,000

Note: Cells 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
1991 ACS Salary Survey

REGION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific						
Total	179	49,226	20,968	36,000	44,500	56,200
2-4	20	32,700	7,470	26,000	34,420	37,550
5-9	39	43,998	17,433	32,700	42,000	50,000
10-14	38	49,118	19,834	38,000	45,800	54,000
15-19	28	57,027	22,389	39,080	49,500	68,000
Mountain						
Total	55	43,802	16,885	31,500	42,500	52,000
10-14	16	46,448	9,381	39,030	45,850	52,280
West North Central						
Total	106	41,660	18,427	29,200	37,100	48,600
2-4	20	29,665	5,674	25,500	28,250	32,500
5-9	24	32,857	7,954	27,000	32,120	38,300
10-14	18	40,782	10,470	33,000	37,600	47,000
West South Central						
Total	110	48,680	26,014	34,500	44,800	54,000
5-9	24	35,897	9,832	29,500	34,250	39,650
10-14	29	47,730	12,980	42,000	45,000	53,700
15-19	20	52,933	12,540	46,000	49,600	60,000
East North Central						
Total	368	47,341	32,959	33,000	40,770	53,500
2-4	52	29,749	6,316	25,500	28,800	34,000
5-9	96	37,113	8,561	30,700	36,400	40,000
10-14	56	44,126	12,707	36,950	42,500	48,100
15-19	44	51,225	15,447	40,500	48,500	56,500
20-24	32	53,128	15,090	43,280	50,500	58,500
25-29	31	60,477	30,632	46,000	55,000	65,000
30-34	28	59,829	32,301	43,100	55,500	66,500
East South Central						
Total	65	45,801	12,596	35,700	44,000	53,000
5-9	16	39,564	6,135	35,100	39,150	45,000
Middle Atlantic						
Total	339	47,204	22,557	33,300	42,000	53,000
2-4	43	31,846	3,831	30,000	31,033	34,100
5-9	68	37,125	10,984	31,650	36,000	41,100
10-14	64	47,029	15,133	38,240	43,822	52,500
15-19	44	46,886	13,301	40,150	44,925	51,750
20-24	19	55,833	22,821	41,500	47,800	62,000
25-29	30	59,887	17,057	46,176	57,154	74,000
30-34	35	58,066	18,015	44,000	56,600	68,000
35-39	16	72,928	50,544	51,500	57,500	74,400

Table 2.2.4 (continued)

REGION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
South Atlantic						
Total	209	43,751	18,185	32,000	40,000	50,200
2-4	20	29,888	6,076	25,500	29,450	33,000
5-9	56	34,668	7,475	30,000	34,350	38,900
10-14	43	41,587	11,620	33,000	41,880	46,200
15-19	27	45,546	11,665	36,000	47,000	57,216
20-24	21	58,494	16,720	50,100	54,750	65,450
New England						
Total	113	45,862	33,153	32,000	39,900	51,650
2-4	18	31,725	6,134	26,800	32,300	36,000
5-9	35	36,658	6,958	30,145	35,000	41,110
20-24	15	54,711	16,978	41,750	60,250	66,000

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

Table 2.2.5

SALARIES of BS CHEMISTS employed FULL-TIME in INDUSTRY
by SUPERVISORY STATUS and YEARS SINCE BS
1991 ACS Salary Survey

SUPERVISORY STATUS & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Non-supervisors						
Total	815	38,711	12,170	30,000	36,500	45,000
0-1	35	26,989	6,349	23,600	27,000	30,000
2-4	152	30,072	5,230	26,100	30,000	33,500
5-9	216	34,834	8,380	30,000	34,000	38,600
10-14	152	39,728	8,988	33,000	39,108	45,600
15-19	86	42,910	9,174	36,100	42,240	49,700
20-24	50	48,043	11,430	40,800	48,800	54,000
25-29	49	50,266	12,132	43,250	49,000	60,000
30-34	39	50,893	15,374	42,000	46,500	60,000
35-39	22	55,665	21,880	40,000	52,000	62,400
Supervisors						
Total	693	55,460	31,685	40,000	50,000	63,000
2-4	30	33,150	8,309	26,000	32,000	37,200
5-9	150	40,937	12,405	33,600	38,000	46,000
10-14	133	50,898	15,582	42,000	48,000	54,000
15-19	116	54,488	16,448	42,250	51,250	64,500
20-24	72	57,897	15,590	47,000	56,000	65,900
25-29	50	65,066	27,060	51,050	60,250	74,000
30-34	65	68,685	30,153	51,000	60,250	75,000
35-39	36	87,319	84,259	54,000	70,000	88,500
40 or more	36	85,280	57,375	53,625	66,250	94,000

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

Table 2.2.6

SALARIES of BS CHEMISTS employed FULL-TIME in INDUSTRY
by TOTAL SUBORDINATES and YEARS SINCE BS
1991 ACS Salary Survey

TOTAL SUBORDINATES & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
None						
Total	557	38,213	13,503	30,000	36,000	43,000
0-1	27	26,726	6,065	23,200	26,000	30,000
2-4	117	29,812	5,234	26,000	30,000	33,500
5-9	147	34,335	8,397	30,000	33,950	38,000
10-14	105	39,088	8,449	32,760	38,700	44,964
15-19	56	43,658	12,343	36,050	42,370	49,350
20-24	29	47,106	10,848	41,000	47,328	52,000
25-29	26	49,716	12,760	42,000	49,362	60,000
30-34	28	54,777	23,032	42,000	45,870	64,000
1-2						
Total	310	44,813	15,897	33,292	43,000	52,000
2-4	31	30,512	5,293	26,100	30,850	35,000
5-9	58	36,294	7,565	32,000	35,303	42,000
10-14	63	44,612	11,188	35,750	45,000	50,000
15-19	44	46,509	12,272	37,750	46,954	54,250
20-24	34	53,109	20,363	40,000	50,551	60,900
25-29	30	51,060	12,761	43,250	50,000	60,000
30-34	20	57,001	15,286	48,425	52,500	69,000
3-9						
Total	400	48,394	22,952	36,000	45,000	55,000
2-4	35	31,744	7,388	26,000	31,000	36,350
5-9	103	38,988	12,531	31,650	36,200	45,000
10-14	61	47,660	14,505	40,000	44,500	52,000
15-19	64	48,679	13,352	39,700	47,000	58,000
20-24	39	56,685	13,576	46,000	57,000	65,900
25-29	24	60,351	16,882	48,000	59,850	70,350
30-34	32	55,519	12,557	47,000	57,000	60,000
35-39	17	61,883	18,017	50,000	59,100	70,200
40 or more	20	78,163	70,568	52,500	55,500	72,500
10-14						
Total	99	52,240	19,506	37,000	50,000	61,000
5-9	27	41,739	14,701	30,700	37,300	50,000
10-14	19	48,924	12,166	38,784	50,000	59,000
15-19	15	57,129	17,078	44,200	53,000	70,000
15-29						
Total	105	56,903	27,228	40,100	50,000	65,000
5-9	26	38,908	9,433	34,500	39,100	45,000
10-14	26	48,848	11,640	40,000	48,000	52,261
15-19	15	63,593	15,509	50,000	60,000	78,000
30-49						
Total	35	61,617	24,320	45,781	54,180	72,000
50-99						
Total	31	75,571	45,519	51,000	65,000	80,000
100 or more						
Total	17	122,243	120,289	71,900	80,500	120,500

Note: Cells 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
1991 ACS Salary Survey

WORK SPECIALTY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Biochemistry						
Total	19	52,210	15,481	40,650	47,050	65,052
Biotechnology						
Total	29	55,973	27,906	43,200	50,000	65,200
General chemistry						
Total	33	55,572	23,232	40,000	50,000	64,000
Agricultural chemistry						
Total	28	60,855	32,879	38,785	51,500	74,450
Analytical chemistry						
Total	284	49,521	14,005	40,598	47,880	57,000
5-9	33	39,216	6,271	34,800	40,000	44,000
10-14	60	45,426	8,886	40,000	45,000	51,000
15-19	61	48,990	11,140	43,620	49,000	57,240
20-24	44	52,250	11,175	44,750	51,150	57,980
25-29	42	51,023	16,248	39,400	49,000	60,000
30-34	15	57,827	18,176	42,000	58,720	70,000
35-39	18	63,762	18,242	53,000	62,780	72,840
Environmental chemistry						
Total	126	48,884	16,030	37,000	45,000	58,000
5-9	21	39,992	9,147	34,500	40,000	45,000
10-14	31	45,107	11,456	37,000	43,500	51,000
15-19	30	49,867	12,761	39,000	50,000	56,700
20-24	20	58,460	18,318	45,850	60,000	71,000
Inorganic chemistry						
Total	25	53,511	17,557	44,000	52,000	59,800
Materials science						
Total	51	59,726	27,459	43,500	52,000	67,000
Medicinal-Pharmaceutical						
Total	72	54,713	19,752	42,100	50,350	60,000
5-9	16	38,830	4,981	35,000	38,500	43,000
Organic chemistry						
Total	126	55,396	25,718	40,000	48,096	65,000
5-9	19	36,309	3,886	34,000	36,000	39,000
10-14	16	47,281	12,385	41,125	43,050	51,250
15-19	21	52,109	15,425	38,246	49,500	61,410
20-24	24	56,887	13,931	46,470	54,950	65,000
25-29	17	62,169	20,221	47,200	51,000	73,000

Table 2.3.1 (continued)

WORK SPECIALTY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Physical chemistry						
Total	23	56,991	18,180	43,000	57,200	66,000
Polymer chemistry						
Total	103	57,106	16,779	45,000	57,000	66,700
10-14	22	55,261	11,555	46,000	53,250	65,000
15-19	16	52,821	12,051	48,400	53,000	60,250
20-24	19	62,151	18,781	49,500	61,000	68,000
Other chemical science						
Total	31	55,251	19,753	41,000	50,000	65,500
Business Administration						
Total	27	74,383	26,161	55,000	70,000	100,000
Other nonchemistry						
Total	43	62,335	23,968	45,100	60,000	74,200

Note: Cells 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
1991 ACS Salary Survey

WORK FUNCTION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
R&D Mgt						
Total	126	68,047	19,562	56,000	65,000	78,000
10-14	21	58,958	11,295	50,000	59,000	65,000
15-19	19	62,830	17,670	51,300	63,250	66,700
20-24	33	66,653	16,528	56,000	67,000	72,000
25-29	17	74,684	18,932	62,500	71,000	81,756
Basic research						
Total	93	46,449	13,576	38,000	44,740	52,000
5-9	25	37,720	5,218	34,000	38,000	41,850
10-14	19	43,342	9,657	37,000	44,600	49,000
20-24	15	52,958	9,745	45,000	53,700	56,000
Applied research						
Total	299	50,679	13,626	41,000	48,422	58,300
5-9	50	38,725	7,168	34,000	38,000	41,000
10-14	63	48,049	10,744	42,000	45,000	52,000
15-19	61	50,149	9,724	44,300	49,850	55,000
20-24	37	52,935	11,794	45,000	52,000	56,960
25-29	25	57,586	13,817	47,200	60,000	68,000
30-34	25	61,407	16,416	48,900	59,500	71,000
35-39	22	60,079	9,900	54,000	58,460	66,960
General Mgt						
Total	95	71,907	37,970	48,000	62,000	80,000
20-24	22	73,517	23,649	56,890	66,500	80,300
Marketing						
Total	81	58,260	19,874	44,700	53,750	71,000
10-14	19	48,394	10,180	43,000	47,000	54,500
15-19	18	60,561	21,165	44,400	56,500	78,000
Production						
Total	107	47,610	14,666	38,000	46,000	57,000
10-14	25	43,801	10,330	34,350	42,500	50,500
15-19	22	51,160	19,536	36,348	50,000	57,720
20-24	17	48,670	9,289	41,600	51,700	57,000
Health & Safety						
Total	40	53,779	14,421	42,100	50,000	65,000
Other lab analysis						
Total	74	43,218	12,371	35,000	41,600	51,700
10-14	17	41,175	8,035	38,600	41,600	46,000
15-19	17	46,234	11,030	36,500	45,600	53,760
Chem info services						
Total	15	54,627	11,098	43,830	53,623	65,500
Consulting						
Total	46	48,739	13,535	40,250	47,732	56,750
Other						
Total	39	49,533	17,315	38,000	43,620	59,000

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

Table 2.3.3

SALARIES of MS CHEMISTS employed FULL-TIME
by INDUSTRY and YEARS SINCE BS
1991 ACS Salary Survey

INDUSTRY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Analytical service lab						
Total	64	42,058	15,349	30,150	36,639	49,000
Contract research firm						
Total	28	49,079	22,002	31,100	45,000	58,750
Other nonmanufacturing						
Total	81	53,994	24,495	40,000	48,500	60,000
10-14	16	50,060	17,978	40,530	47,250	53,250
15-19	17	45,943	12,739	37,500	47,492	53,000
Aerospace						
Total	25	52,864	15,813	42,000	48,000	66,000
Basic chemicals						
Total	42	61,901	36,132	45,000	53,950	70,600
Specialty chemicals						
Total	116	55,955	18,177	42,000	51,300	65,000
10-14	24	49,040	9,372	42,090	45,500	55,000
15-19	19	52,979	13,943	43,500	50,000	57,720
20-24	20	60,293	15,718	46,470	64,960	70,500
Agricultural chemicals						
Total	22	54,159	15,607	43,000	49,620	63,000
Coatings						
Total	30	58,229	24,282	40,200	53,900	67,000
Electronics						
Total	30	55,220	18,052	44,000	52,000	60,000
Food						
Total	39	57,583	26,866	41,912	53,000	62,500
Instruments						
Total	28	54,451	24,948	42,000	48,000	57,000
Medical devices						
Total	31	52,824	16,550	41,300	52,000	63,800
Metals						
Total	23	52,550	12,051	44,100	48,000	60,000
Petroleum						
Total	28	65,182	27,541	44,000	62,150	73,450
Pharmaceuticals						
Total	215	51,834	18,077	40,000	48,500	59,000
5-9	37	37,244	5,757	34,000	38,000	40,000
10-14	45	47,319	11,241	39,000	46,800	51,000
15-19	46	52,760	15,015	44,300	52,200	60,000
20-24	31	56,160	14,169	48,500	53,000	60,000
25-29	24	61,298	17,519	46,281	56,000	75,500

Table 2.3.3 (continued)

INDUSTRY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Plastics						
Total	46	60,921	17,906	50,000	59,000	67,080
Rubber						
Total	22	53,468	13,492	45,000	49,000	62,000
Other manufactures						
Total	150	55,479	17,820	43,200	52,000	65,000
5-9	17	40,269	5,192	37,000	40,000	43,200
10-14	36	46,305	10,151	38,825	43,600	52,250
15-19	28	57,769	13,460	48,000	56,550	62,925
20-24	27	62,088	17,518	48,500	62,148	67,000
25-29	19	58,700	23,209	43,500	54,200	70,000

Note: Cells 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
1991 ACS Salary Survey

REGION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific						
Total	104	55,179	22,226	40,000	51,000	63,152
5-9	21	39,338	7,636	34,800	40,000	42,600
10-14	25	49,078	13,044	43,200	48,000	53,000
15-19	16	54,963	17,293	42,250	53,450	62,250
20-24	16	59,639	11,404	51,850	59,000	67,959
Mountain						
Total	29	51,085	16,888	38,500	49,250	59,650
West North Central						
Total	50	55,286	25,422	41,600	48,022	62,500
15-19	18	46,725	15,250	36,000	45,200	49,850
West South Central						
Total	75	53,852	24,215	40,000	47,880	63,000
10-14	15	45,965	9,848	38,000	46,000	57,000
25-29	17	66,862	40,752	46,800	62,000	71,500
East North Central						
Total	222	53,682	21,878	40,600	49,016	61,000
5-9	30	36,616	6,246	33,660	37,850	40,600
10-14	39	46,445	9,736	40,000	45,000	51,300
15-19	48	53,728	14,224	44,150	50,800	60,800
20-24	42	61,391	17,866	48,000	54,700	71,660
25-29	17	56,701	18,370	44,982	53,000	65,000
35-39	19	61,555	22,046	45,000	55,000	76,000
East South Central						
Total	31	53,119	15,531	43,500	52,000	66,000
Middle Atlantic						
Total	283	55,133	18,348	42,000	52,000	64,000
5-9	37	41,522	8,990	36,000	39,000	45,100
10-14	58	50,760	14,696	42,000	48,000	55,500
15-19	48	55,887	15,657	46,300	53,000	63,500
20-24	43	56,683	18,132	44,000	56,000	65,000
25-29	33	56,317	17,939	46,100	50,400	63,000
30-34	23	59,932	14,341	47,400	59,750	72,140
35-39	20	68,555	15,665	56,000	71,000	75,000
South Atlantic						
Total	135	51,151	14,913	41,000	49,000	60,000
5-9	15	38,934	5,535	34,000	40,000	43,350
10-14	30	46,879	11,145	40,500	44,100	58,000
15-19	29	51,384	13,091	44,400	52,000	60,000
20-24	22	51,931	10,886	45,000	51,800	60,000
New England						
Total	83	57,991	26,285	43,000	50,750	65,000
10-14	26	46,241	8,667	42,000	45,000	50,500
20-24	15	71,033	20,494	56,900	65,200	72,000

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

Table 2.3.5

SALARIES of MS CHEMISTS employed FULL-TIME in INDUSTRY
by SUPERVISORY STATUS and YEARS SINCE BS
1991 ACS Salary Survey

SUPERVISORY STATUS & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Non-supervisors						
Total	490	46,045	11,949	37,800	44,891	53,000
5-9	92	38,450	7,827	34,000	38,000	41,625
10-14	118	43,729	8,654	38,600	44,000	48,900
15-19	91	46,744	9,594	40,650	47,500	53,500
20-24	60	49,030	9,552	42,970	49,800	55,000
25-29	43	48,669	14,251	40,000	47,200	56,500
30-34	32	56,964	14,157	47,400	57,500	70,000
35-39	27	57,812	12,416	48,500	55,000	67,080
Supervisors						
Total	504	61,659	22,198	46,000	59,000	71,000
5-9	40	41,039	7,317	36,500	41,165	45,000
10-14	93	52,853	13,616	44,000	50,000	60,000
15-19	97	57,821	16,164	47,000	55,000	65,052
20-24	104	64,135	18,221	52,500	63,750	71,830
25-29	61	66,496	25,322	51,000	60,000	76,000
30-34	39	75,424	27,726	56,000	72,140	90,000
35-39	40	78,311	30,050	58,320	72,840	90,000
40 or more	27	74,849	23,370	59,800	70,000	90,000

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

Table 2.3.6

SALARIES of MS CHEMISTS employed FULL-TIME in INDUSTRY
by TOTAL SUBORDINATES and YEARS SINCE BS
1991 ACS Salary Survey

TOTAL SUBORDINATES & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
None						
Total	330	46,392	13,377	37,000	44,800	53,500
5-9	58	37,063	7,853	32,500	36,750	40,000
10-14	79	43,888	7,997	38,900	43,500	48,900
15-19	63	47,387	10,788	41,750	49,000	53,900
20-24	44	50,593	15,255	42,000	50,400	57,500
25-29	32	51,200	14,773	43,500	47,000	62,000
30-34	18	55,577	14,771	45,800	54,300	70,000
35-39	17	57,898	14,862	50,375	55,000	71,605
1-2						
Total	215	49,357	15,161	40,250	46,950	55,000
5-9	38	39,341	4,721	35,000	40,000	43,200
10-14	49	46,073	13,964	39,750	45,000	50,500
15-19	46	49,982	10,273	43,620	50,000	56,400
20-24	28	54,675	9,331	48,250	54,800	60,574
25-29	20	47,342	14,940	35,000	47,500	53,800
3-9						
Total	289	55,300	17,292	44,000	53,000	65,052
5-9	34	41,917	10,105	36,000	40,300	46,000
10-14	60	51,658	11,605	44,000	50,000	58,620
15-19	48	50,503	13,857	39,000	50,000	64,000
20-24	55	60,608	16,429	50,000	60,000	69,000
25-29	27	60,239	12,151	51,000	60,000	69,000
30-34	23	61,949	18,440	49,500	61,370	73,666
35-39	22	63,848	27,767	48,500	60,546	67,080
10-14						
Total	64	63,008	18,525	46,400	60,000	78,000
15-29						
Total	59	65,744	19,896	51,000	64,000	76,068
20-24	15	67,047	15,240	60,000	68,200	80,000
30-49						
Total	25	71,767	17,975	59,000	70,000	86,800
50 or more						
Total	38	96,262	44,267	67,000	82,250	117,000

Note: Cells 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
1991 ACS Salary Survey

WORK SPECIALTY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Biochemistry						
Total	89	68,083	25,850	50,000	63,000	78,750
10-14	16	59,047	11,312	49,650	58,575	68,300
15-19	25	60,080	14,526	49,000	59,150	64,250
Biotechnology						
Total	97	71,930	27,667	52,120	64,500	83,000
10-14	17	53,249	12,242	50,000	52,120	59,900
15-19	22	68,617	18,955	59,000	64,000	77,000
20-24	22	83,176	30,831	62,000	69,000	96,000
General chemistry						
Total	45	65,419	22,113	48,500	61,500	74,500
Agricultural chem						
Total	82	71,531	25,677	54,300	63,900	80,000
15-19	22	59,355	11,218	52,000	59,000	65,000
20-24	15	67,920	14,695	60,000	63,900	72,500
Analytical chem						
Total	357	61,455	14,601	51,300	60,000	69,000
5-9	42	47,884	5,786	45,000	48,115	51,012
10-14	83	54,706	8,049	50,000	54,000	59,640
15-19	77	61,880	10,392	55,000	61,000	67,000
20-24	53	65,928	13,101	58,000	67,500	75,000
25-29	60	71,737	19,553	60,000	67,050	76,600
30-34	21	66,120	13,286	60,000	66,000	75,000
35-39	15	67,911	16,908	58,000	63,700	85,000
Clinical chemistry						
Total	25	63,360	17,452	52,350	58,050	73,150
Environmental chem						
Total	99	66,933	22,035	48,500	63,892	80,000
10-14	15	46,348	5,908	42,000	46,000	50,000
15-19	17	60,568	13,870	51,000	62,000	71,000
20-24	17	59,702	13,014	52,200	59,375	66,676
25-29	18	76,090	20,891	63,500	79,560	91,000
30-34	16	82,981	20,290	68,500	86,903	97,750
Inorganic chem						
Total	93	64,862	17,804	52,000	62,000	71,500
10-14	23	50,983	6,021	47,000	49,800	53,000
15-19	20	62,620	9,914	55,200	62,000	67,400
Materials science						
Total	171	71,045	40,045	56,000	64,888	75,000
10-14	32	56,662	9,202	51,644	55,750	63,750
15-19	29	62,087	12,190	55,000	60,500	69,750
20-24	29	71,742	14,935	61,000	65,000	78,000
25-29	22	89,150	95,495	60,000	63,000	81,000
30-34	17	77,656	23,815	65,000	75,000	85,000
35-39	22	82,596	23,550	70,000	76,250	95,000

Table 2.4.1 (continued)

WORK SPECIALTY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Medicinal-Pharmaceutical						
Total	237	71,991	29,627	55,000	63,850	79,700
5-9	23	53,193	5,655	51,000	53,665	55,000
10-14	59	59,331	8,201	53,000	58,700	64,000
15-19	48	65,038	14,275	54,000	62,500	75,000
20-24	30	73,418	21,366	56,000	69,500	90,000
25-29	38	79,784	16,815	69,480	76,050	91,000
30-34	19	112,041	70,352	65,232	91,000	132,000
Organic chemistry						
Total	390	66,601	21,389	52,740	62,000	75,000
5-9	37	48,783	5,970	46,400	48,000	50,700
10-14	68	54,873	8,105	50,000	53,600	59,260
15-19	67	59,882	10,737	52,000	59,000	67,000
20-24	70	68,552	12,925	59,500	67,500	74,800
25-29	69	78,619	24,866	63,300	75,100	89,944
30-34	34	82,926	31,307	65,000	75,000	91,800
35-39	29	76,359	30,857	59,000	76,000	90,000
40 or more	16	73,185	18,251	58,902	66,500	85,000
Physical chemistry						
Total	140	68,802	18,242	55,100	66,240	80,000
5-9	18	48,709	6,368	45,000	48,600	51,000
10-14	21	56,165	12,266	47,000	51,100	61,600
15-19	18	65,438	11,575	58,500	63,000	67,018
20-24	25	73,813	15,216	60,000	72,800	83,000
25-29	29	76,992	15,610	67,000	74,500	85,300
Polymer chemistry						
Total	413	66,293	19,654	53,000	61,020	75,000
5-9	40	48,996	3,395	46,200	49,250	52,000
10-14	98	55,095	7,831	50,500	53,775	57,600
15-19	48	60,317	11,870	52,500	58,200	65,400
20-24	54	71,296	17,073	60,000	70,000	78,200
25-29	61	79,633	19,978	63,780	76,000	97,000
30-34	53	77,912	28,235	61,575	71,688	83,500
35-39	28	80,741	18,411	72,250	78,000	88,000
40 or more	31	66,219	12,858	58,000	65,000	74,000
Other chem science						
Total	48	70,454	22,649	51,000	64,450	84,500
Business admin						
Total	43	117,942	87,367	72,000	101,000	126,600
25-29	19	118,468	59,486	76,500	92,000	140,000
Computer science						
Total	31	64,342	21,857	51,000	62,300	72,000
Law						
Total	15	75,874	15,373	62,000	77,000	90,000
Other nonchem						
Total	79	84,063	41,737	62,500	76,070	86,000
20-24	15	77,056	18,126	65,000	76,620	90,000
25-29	17	90,386	28,255	70,000	81,900	106,080

Note: Cells 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
1991 ACS Salary Survey

WORK FUNCTION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
R&D Mgt						
Total	542	83,744	28,285	66,000	76,140	95,000
10-14	61	64,372	12,470	55,300	64,000	70,800
15-19	83	71,552	13,451	62,800	70,000	77,000
20-24	115	80,424	20,392	68,000	75,500	90,000
25-29	134	92,486	26,446	73,500	85,700	101,500
30-34	61	95,161	31,010	72,000	89,000	106,000
35-39	53	101,238	40,620	74,250	91,500	125,500
40 or more	25	89,542	42,677	66,500	77,500	102,500
Basic research						
Total	372	62,503	15,629	52,000	60,000	69,000
5-9	60	49,895	6,673	47,850	50,200	53,450
10-14	107	56,638	8,166	51,688	55,000	61,200
15-19	67	60,719	12,058	54,000	60,000	65,400
20-24	46	67,574	14,888	59,000	67,500	72,800
25-29	34	74,666	15,860	65,000	73,000	78,000
30-34	28	75,581	21,565	60,463	72,500	83,250
35-39	15	79,827	13,239	65,000	76,800	93,000
40 or more	15	78,400	19,224	62,000	72,550	92,000
Applied research						
Total	1044	60,498	13,704	51,000	58,000	67,320
5-9	127	48,803	4,570	46,000	48,415	51,300
10-14	244	53,019	7,060	48,500	52,120	57,000
15-19	211	59,200	9,923	52,500	58,400	64,600
20-24	148	64,410	11,747	57,000	63,000	70,000
25-29	128	68,284	14,642	60,000	66,200	77,300
30-34	80	69,300	14,172	59,000	67,700	77,300
35-39	64	74,772	17,303	66,000	76,000	84,000
40 or more	42	70,761	18,372	59,580	65,000	80,000
General Mgt						
Total	127	95,655	72,365	63,000	78,000	102,000
20-24	16	80,399	19,290	67,500	82,500	96,150
25-29	40	108,470	78,623	69,500	88,500	110,000
30-34	20	105,131	52,817	65,000	93,500	132,000
35-39	15	132,087	130,074	64,000	100,000	135,000
Marketing						
Total	83	67,684	18,603	57,000	64,500	77,700
25-29	24	69,710	19,246	59,066	65,450	74,000
Production						
Total	58	60,127	16,391	50,000	56,000	70,000
Health & Safety						
Total	60	74,223	22,875	60,000	74,500	85,140
30-34	17	81,932	26,160	64,284	75,060	98,500

Table 2.4.2 (continued)

WORK FUNCTION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Other lab analysis						
Total	49	58,220	12,728	50,934	58,000	62,300
Chem info services						
Total	16	63,445	17,232	49,950	60,798	75,550
Patents						
Total	25	86,437	56,845	65,000	77,000	90,000
Consulting						
Total	25	63,307	12,739	55,200	63,250	70,500
Other						
Total	42	66,038	21,466	51,000	63,150	75,000

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

Table 2.4.3

SALARIES of PhD CHEMISTS employed FULL-TIME
by INDUSTRY and YEARS SINCE BS
1991 ACS Salary Survey

INDUSTRY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Analytical service lab						
Total	51	62,885	23,418	45,500	61,000	74,000
Contract research firm						
Total	87	57,619	18,412	45,400	55,000	69,000
10-14	17	49,004	10,134	43,000	50,000	52,000
Other nonmanuf						
Total	98	71,998	37,061	52,000	64,800	80,000
15-19	15	59,478	17,591	51,000	60,720	63,000
20-24	15	65,037	19,801	53,700	57,750	81,000
25-29	20	73,961	22,876	62,250	72,050	82,000
30-34	18	95,235	72,960	62,238	70,500	98,500
Aerospace						
Total	59	66,084	22,198	51,688	60,000	76,000
Basic chemicals						
Total	192	70,162	42,147	53,000	61,780	75,060
5-9	20	49,267	2,373	47,828	48,780	49,700
10-14	39	54,945	6,721	50,300	53,000	59,640
15-19	35	60,792	10,113	54,950	59,350	65,000
20-24	24	69,447	10,053	60,700	68,000	74,500
25-29	29	84,506	20,517	70,000	81,780	99,000
30-34	17	78,790	24,681	62,000	73,670	91,000
40 or more	17	77,645	19,163	65,180	73,330	88,746
Specialty chems						
Total	368	66,650	23,999	52,000	62,000	74,900
5-9	39	48,690	5,279	46,000	48,000	52,000
10-14	65	53,216	6,517	49,400	53,000	55,680
15-19	55	61,176	12,025	52,500	61,326	67,000
20-24	54	71,053	17,376	60,000	68,200	80,000
25-29	71	76,379	34,266	60,200	67,500	78,400
30-34	35	76,582	28,575	59,000	67,500	83,500
35-39	33	81,451	25,630	67,800	76,800	92,163
40 or more	16	77,537	21,045	64,000	78,000	83,811
Agricultural chems						
Total	108	66,779	25,687	53,000	61,250	73,000
10-14	15	53,749	5,816	49,800	53,775	58,000
15-19	22	58,291	7,060	53,000	59,500	63,000
20-24	28	67,549	8,215	60,000	65,000	74,000
Biochemical prods						
Total	44	59,093	16,918	47,750	59,350	65,000
Coatings						
Total	81	65,027	25,716	51,000	55,980	73,000
10-14	20	53,323	5,810	49,900	51,923	54,000
Electronics						
Total	76	75,030	52,031	60,000	67,000	76,360
10-14	15	57,837	8,764	49,560	57,000	65,000
15-19	17	68,639	11,497	62,500	66,500	72,000
25-29	15	103,611	112,330	60,000	68,640	100,000

Table 2.4.3 (continued)

INDUSTRY & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Food						
Total	54	74,459	23,585	58,000	68,900	81,700
Glass						
Total	15	67,815	18,501	51,000	65,000	81,300
Instruments						
Total	53	61,676	16,900	50,000	60,000	68,000
Medical devices						
Total	103	68,312	30,770	51,000	62,000	73,300
10-14	22	55,908	16,920	48,200	54,400	60,000
15-19	21	65,133	18,072	55,000	62,000	70,760
20-24	25	71,319	24,228	60,000	68,300	75,000
25-29	15	84,738	59,734	53,000	70,000	76,000
Paper						
Total	28	61,919	26,198	50,000	55,000	62,000
Petroleum						
Total	118	76,192	22,185	58,900	71,760	90,000
15-19	23	63,818	13,632	55,000	63,250	71,000
20-24	25	75,812	13,338	64,100	78,000	87,000
25-29	22	90,872	21,784	70,000	90,550	102,000
30-34	15	86,316	18,355	75,000	83,000	102,500
Pharmaceuticals						
Total	474	71,590	24,142	55,000	65,000	79,400
5-9	49	52,050	6,035	50,000	51,800	54,000
10-14	119	59,049	8,582	53,000	58,000	65,000
15-19	91	65,884	13,573	57,000	63,300	75,000
20-24	67	76,609	21,996	61,000	70,300	92,000
25-29	74	85,612	22,654	69,960	80,000	97,000
30-34	34	90,367	35,503	65,232	78,550	105,000
35-39	27	98,277	34,995	73,000	86,300	125,000
Plastics						
Total	144	68,462	19,096	54,540	62,000	78,000
10-14	29	54,521	5,260	50,756	54,770	57,500
20-24	19	64,566	10,981	57,000	61,440	68,500
25-29	33	77,666	19,947	62,000	75,000	82,000
30-34	16	86,995	22,681	69,750	82,200	102,500
Rubber						
Total	24	64,921	17,235	48,950	59,816	73,500
Soaps						
Total	36	68,476	18,194	51,600	67,509	84,000
Other manufactures						
Total	241	68,713	25,748	53,040	62,000	75,600
5-9	15	48,552	5,053	45,000	48,500	53,000
10-14	36	55,443	9,465	49,400	53,420	60,000
15-19	44	59,417	10,099	51,000	58,200	65,500
20-24	42	68,655	14,482	59,400	66,050	76,300
25-29	41	80,787	26,705	61,440	75,000	94,000
30-34	30	77,153	17,953	62,000	73,500	86,000
35-39	20	85,829	50,868	60,120	73,600	85,000

Note: Cells 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
1991 ACS Salary Survey

REGION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific						
Total	274	69,796	33,688	52,000	64,000	77,000
5-9	24	48,608	5,504	44,000	48,840	52,700
10-14	61	56,071	11,756	50,000	52,164	60,000
15-19	56	67,219	13,658	59,250	65,000	74,000
20-24	46	68,480	16,573	58,000	68,000	75,500
25-29	44	94,090	68,449	61,600	76,500	102,594
30-34	21	83,119	16,886	70,000	80,000	96,000
Mountain						
Total	60	66,402	34,283	47,300	55,000	69,000
10-14	15	51,278	10,481	46,000	49,800	55,000
15-19	17	56,509	18,847	47,500	52,090	60,500
West North Central						
Total	148	67,381	31,195	52,500	60,200	72,000
10-14	32	53,394	7,246	50,100	53,550	56,900
15-19	28	58,377	9,554	52,000	58,500	65,000
20-24	22	72,457	22,705	59,400	65,100	80,000
25-29	23	84,555	47,234	66,500	71,900	92,500
West South Central						
Total	186	66,795	20,881	51,120	61,200	74,500
5-9	29	48,403	3,012	46,000	48,000	50,000
10-14	30	55,546	9,932	49,700	53,000	61,200
15-19	40	59,541	10,241	52,500	58,200	65,000
20-24	18	71,748	19,307	59,000	69,000	79,900
25-29	38	80,691	22,319	66,000	75,000	90,100
East North Central						
Total	469	66,958	20,954	52,950	61,650	75,000
5-9	42	49,170	6,835	46,000	48,000	52,000
10-14	97	55,012	8,607	50,000	53,370	59,550
15-19	79	61,369	11,382	52,500	60,000	68,900
20-24	60	68,563	13,466	59,100	68,000	78,000
25-29	91	80,696	26,054	63,000	74,000	92,000
30-34	51	80,752	23,971	64,284	76,950	95,000
35-39	32	79,390	26,096	64,000	79,800	90,000
40 or more	17	60,287	8,605	55,000	60,800	64,450
East South Central						
Total	62	58,881	15,497	49,400	57,000	68,000
Middle Atlantic						
Total	695	70,987	25,729	55,000	65,400	79,550
5-9	59	50,569	4,590	47,700	50,800	53,496
10-14	116	57,024	9,897	50,756	54,500	60,930
15-19	102	64,084	13,249	55,000	62,900	71,490
20-24	131	73,047	17,975	60,496	70,250	82,619
25-29	118	77,828	23,001	65,000	74,950	85,150
30-34	78	86,970	44,349	65,148	78,000	91,000
35-39	64	86,361	27,626	69,000	80,000	96,000
40 or more	27	81,315	34,419	64,000	70,200	95,000

Table 2.4.4 (continued)

REGION & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
South Atlantic						
Total	346	68,559	35,996	54,000	62,450	75,130
5-9	29	48,822	7,541	46,600	48,600	53,000
10-14	75	55,939	8,007	51,100	55,000	62,400
15-19	57	60,378	10,812	55,000	60,000	66,000
20-24	58	68,519	16,495	60,000	63,550	77,000
25-29	49	75,939	20,150	64,000	75,000	88,250
30-34	29	81,001	26,555	60,925	75,000	100,000
35-39	31	99,730	93,570	68,200	79,080	98,000
40 or more	18	84,388	50,995	64,000	72,500	80,000
New England						
Total	199	69,429	25,872	53,000	63,850	80,000
5-9	26	49,597	7,268	45,000	49,740	53,000
10-14	29	56,521	9,149	51,000	60,000	63,000
15-19	30	64,711	11,068	55,000	63,800	71,800
20-24	31	72,108	21,104	60,000	67,000	83,000
25-29	31	81,639	35,165	62,500	80,300	89,000
30-34	19	73,168	31,803	56,000	64,000	80,000
35-39	21	83,339	28,716	63,600	79,000	100,000

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

Table 2.4.5

SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY
by SUPERVISORY STATUS and YEARS SINCE BS
1991 ACS Salary Survey

SUPERVISORY STATUS & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Non-supervisors						
Total	966	57,956	12,882	49,560	55,000	65,000
5-9	150	48,530	5,511	46,000	48,820	52,000
10-14	229	52,056	7,464	48,000	51,228	55,000
15-19	165	56,729	9,667	50,000	56,630	62,500
20-24	133	60,768	11,273	54,800	59,650	67,250
25-29	114	64,822	14,436	55,300	63,300	75,000
30-34	74	66,779	13,859	56,000	65,148	77,300
35-39	51	71,054	14,872	60,120	72,380	80,000
40 or more	49	68,749	17,318	58,000	64,500	75,000
Supervisors						
Total	1451	75,711	32,426	59,100	69,000	84,000
5-9	80	50,335	7,043	45,600	50,000	53,665
10-14	241	59,024	9,875	53,000	57,000	64,000
15-19	253	65,683	12,808	58,000	64,000	72,000
20-24	252	75,462	18,341	63,500	71,500	84,000
25-29	289	87,570	37,922	69,000	79,900	97,000
30-34	157	90,110	37,290	68,400	80,000	102,000
35-39	124	95,238	55,582	70,000	85,000	103,000
40 or more	55	86,667	41,012	65,000	77,500	93,500

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

Table 2.4.6

SALARIES of PhD CHEMISTS employed FULL-TIME in INDUSTRY
by TOTAL SUBORDINATES and YEARS SINCE BS
1991 ACS Salary Survey

TOTAL SUBORDINATES & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
None						
Total	468	58,483	13,691	49,100	55,000	65,000
5-9	66	48,260	4,971	45,360	48,115	50,400
10-14	90	52,128	8,000	48,000	51,120	54,540
15-19	80	56,588	10,348	50,000	57,160	62,050
20-24	60	58,641	12,485	50,000	58,000	63,600
25-29	71	64,895	16,693	53,000	63,000	75,000
30-34	47	65,703	14,864	53,200	62,238	74,000
35-39	25	73,424	14,034	64,000	77,700	80,000
40 or more	28	66,545	12,583	58,000	64,000	76,000
1-2						
Total	802	60,239	12,993	51,012	58,000	67,700
5-9	118	49,309	5,374	46,960	50,000	52,000
10-14	212	54,018	6,709	50,000	53,500	58,000
15-19	141	59,598	10,060	53,000	59,150	65,000
20-24	105	64,982	11,003	57,750	65,000	71,000
25-29	89	68,707	12,053	61,200	67,000	75,000
30-34	53	70,603	13,604	59,500	71,000	79,400
35-39	53	70,981	17,359	63,800	73,000	78,540
40 or more	31	72,023	19,339	60,900	70,500	76,500
3-9						
Total	661	68,328	26,344	56,000	65,000	76,000
5-9	36	49,419	8,670	44,875	49,660	54,000
10-14	126	57,945	9,544	51,000	56,250	64,000
15-19	134	62,894	11,534	56,000	62,550	69,000
20-24	127	70,577	15,765	60,991	68,000	77,000
25-29	110	75,507	17,423	63,000	74,000	84,000
30-34	61	76,013	15,760	65,000	73,000	86,000
35-39	41	91,508	82,005	65,000	80,000	95,000
40 or more	26	77,832	19,217	64,000	73,000	88,000
10-14						
Total	152	77,478	25,634	64,000	75,000	85,000
10-14	18	57,961	13,340	50,000	54,150	68,000
15-19	24	69,114	10,992	62,500	66,750	73,250
20-24	30	78,430	17,004	69,500	78,000	85,000
25-29	32	80,454	16,821	71,500	80,000	90,050
30-34	21	91,208	27,780	72,000	80,375	109,000
35-39	15	88,153	15,705	76,000	86,500	97,000
15-29						
Total	172	81,886	32,060	66,200	75,600	91,000
10-14	18	68,178	17,065	60,000	68,000	73,500
15-19	26	70,430	13,703	59,600	72,000	77,000
20-24	38	77,348	15,330	66,420	75,000	89,977
25-29	43	83,965	16,027	72,000	85,000	91,800
30-34	20	114,324	71,727	72,638	93,000	130,000
35-39	18	82,586	26,608	69,000	76,280	91,000

Table 2.4.6 (continued)

TOTAL SUBORDINATES & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
30-49						
Total	79	95,539	28,961	77,000	92,500	103,000
20-24	15	88,300	23,474	73,200	84,000	92,000
25-29	26	103,558	36,024	83,000	96,000	115,000
50-99						
Total	65	99,102	30,612	76,000	98,000	120,000
25-29	17	110,788	28,617	84,000	120,000	130,000
100 or more						
Total	55	141,887	67,919	102,000	132,000	150,000
25-29	24	149,174	88,783	102,000	130,000	167,000

Note: Cells 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
1991 ACS Salary Survey

HIGHEST DEGREE & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BS						
Total	169	40,322	12,168	31,366	39,000	48,000
2-4	16	28,744	5,265	24,359	29,750	31,827
5-9	24	31,120	5,755	27,000	30,548	35,100
10-14	31	36,919	7,281	32,000	37,000	44,000
15-19	24	44,193	8,391	38,438	42,630	49,470
20-24	19	47,617	10,971	35,900	47,000	57,000
25-29	18	45,459	13,685	35,000	44,925	57,000
30-34	17	47,807	10,322	41,000	48,800	54,500
MS						
Total	116	46,868	13,089	36,482	45,749	55,000
5-9	16	35,109	4,851	31,456	35,500	37,647
10-14	15	40,110	9,272	33,190	38,500	48,000
15-19	20	46,408	11,494	39,000	45,811	54,500
20-24	18	46,546	8,847	40,000	47,407	50,300
30-34	20	52,991	10,251	48,241	54,100	62,086
PhD						
Total	332	59,391	17,588	47,000	56,559	70,000
5-9	16	43,653	8,308	37,000	44,800	48,805
10-14	36	46,269	10,038	38,169	45,998	55,050
15-19	40	48,290	8,618	42,500	45,900	52,277
20-24	54	58,995	17,757	48,600	58,000	65,753
25-29	70	61,077	14,574	52,000	59,372	70,000
30-34	42	65,412	15,638	55,800	65,658	77,000
35-39	45	67,818	20,403	54,800	67,000	80,000
40 or more	29	74,545	17,465	60,000	79,500	80,138

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & CONTRACT STATUS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
9-10 month						
Full professor	542	56,525	16,414	45,000	53,265	65,000
Assoc professor	202	41,810	8,811	35,500	40,188	46,000
Asst professor	201	34,478	5,947	30,600	34,000	38,000
Instructor	24	27,971	9,149	22,000	28,000	32,000
No ranks	18	38,178	10,034	31,000	37,654	41,850
11-12 month						
Full professor	228	79,309	26,079	61,600	76,000	94,000
Assoc professor	75	56,508	13,639	48,000	54,000	64,000
Asst professor	83	44,180	13,258	37,000	42,000	48,000
Instructor	23	46,106	19,506	29,000	43,200	58,000
Research appt	96	38,761	14,607	29,500	38,000	46,119
Other nonfaculty	45	57,433	29,742	39,500	50,000	71,000

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & YEARS SINCE PhD	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Full professor						
Total	542	56,525	16,414	45,000	53,265	65,000
10-14	16	49,233	13,722	37,783	50,000	56,250
15-19	66	52,131	16,778	43,000	50,000	60,000
20-24	136	53,222	15,352	43,250	48,960	60,980
25-29	135	54,684	13,242	45,000	54,000	60,000
30-34	114	60,533	16,799	48,000	59,643	71,000
35-39	52	61,761	17,741	49,850	57,650	71,500
40+	20	76,559	17,344	65,000	74,627	89,000
Assoc professor						
Total	202	41,810	8,811	35,500	40,188	46,000
5-9	27	42,020	11,171	35,000	38,200	47,000
10-14	67	41,779	7,770	36,000	41,100	45,000
15-19	36	40,852	10,361	33,575	38,530	47,760
20-24	38	41,684	7,546	37,000	41,000	46,000
25-29	18	41,297	6,645	37,000	42,000	45,000
Asst professor						
Total	201	34,478	5,947	30,600	34,000	38,000
2-4	63	33,405	5,716	29,100	32,571	37,000
5-9	96	35,748	6,164	31,700	35,000	38,000
10-14	25	33,955	5,129	30,100	32,300	38,000
Instructor						
Total	24	27,971	9,149	22,000	28,000	32,000
No ranks						
Total	18	38,178	10,034	31,000	37,654	41,850

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & YEARS SINCE PhD	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Full professor						
Total	228	79,309	26,079	61,600	76,000	94,000
15-19	28	67,486	18,991	54,500	63,500	79,539
20-24	60	75,883	19,581	65,000	74,000	86,500
25-29	64	74,134	19,484	61,000	71,068	85,500
30-34	41	81,864	19,399	62,000	85,000	95,400
35-39	19	103,800	50,967	76,000	100,000	115,000
Assoc professor						
Total	75	56,508	13,639	48,000	54,000	64,000
10-14	18	54,783	8,177	48,000	52,500	58,800
15-19	18	55,340	12,245	47,000	53,500	68,000
20-24	18	60,965	19,580	50,000	55,938	60,000
Asst professor						
Total	83	44,180	13,258	37,000	42,000	48,000
5-9	37	44,435	10,296	40,000	42,400	46,500
10-14	19	43,767	19,721	34,000	40,000	45,800
Instructor						
Total	23	46,106	19,506	29,000	43,200	58,000
Research appt						
Total	96	38,761	14,607	29,500	38,000	46,119
2-4	24	32,449	8,025	26,750	31,500	38,500
5-9	29	36,124	9,981	28,000	35,000	45,000
10-14	17	42,697	9,311	36,300	42,000	47,000
Other nonfaculty						
Total	45	57,433	29,742	39,500	50,000	71,000

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & WORK FUNCTION	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Teaching						
Full professor	328	50,003	12,300	42,000	48,000	56,371
Assoc professor	138	39,675	8,024	34,500	38,468	45,000
Asst professor	120	32,139	4,434	29,000	31,625	35,000
Instructor	20	27,371	8,215	23,000	28,000	32,000
No ranks	18	38,178	10,034	31,000	37,654	41,850
Research						
Full professor	71	68,147	16,617	56,000	65,000	80,000
Assoc professor	20	46,354	8,895	40,359	44,375	49,500
Asst professor	41	38,742	5,874	35,000	38,000	43,000

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & WORK FUNCTION	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Teaching						
Full professor	31	61,110	21,270	42,600	61,000	72,000
Asst professor	16	36,170	7,019	30,500	35,500	41,000
Research						
Full professor	87	82,812	24,182	65,000	78,000	98,000
Assoc professor	29	56,383	10,888	50,000	54,000	65,000
Asst professor	53	44,154	9,610	39,000	42,400	48,000
Research appt	86	37,870	14,799	28,000	37,100	45,000
Administration						
Full professor	47	82,504	20,957	66,000	83,000	95,000
Other nonfaculty	28	67,882	31,828	44,450	60,500	79,000

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

Table 4.4.1

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and WORK SPECIALTY - 9 or 10 Month Contract
1991 ACS Salary Survey

ACADEMIC RANK & WORK SPECIALTY	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Biochemistry						
Full professor	65	59,274	15,479	48,500	60,000	70,000
Assoc professor	21	43,912	8,497	38,435	44,000	49,224
Asst professor	21	35,702	5,436	32,000	36,000	38,000
General chemistry						
Full professor	37	45,897	8,971	39,516	46,000	51,000
Assoc professor	25	38,308	8,576	31,000	35,000	44,000
Analytical chemistry						
Full professor	54	54,911	17,434	43,551	48,950	60,960
Assoc professor	24	38,588	6,140	35,101	38,650	42,668
Asst professor	24	34,370	7,546	29,633	33,500	36,750
Inorganic chemistry						
Full professor	65	51,822	12,196	43,000	49,000	60,000
Assoc professor	21	41,078	6,668	37,375	40,000	42,500
Asst professor	30	34,610	4,832	31,000	35,000	37,000
Organic chemistry						
Full professor	145	54,465	15,148	44,550	53,000	60,000
Assoc professor	49	40,431	7,864	35,000	38,000	46,000
Asst professor	46	32,628	4,122	29,600	32,000	35,000
Physical chemistry						
Full professor	121	59,622	16,596	46,000	57,104	70,000
Assoc professor	36	43,581	9,601	37,785	42,000	48,000
Asst professor	43	35,054	5,854	31,000	34,000	38,000
Other chemical science						
Full professor	50	67,354	20,885	54,000	66,474	81,000
Assoc professor	23	48,000	11,019	39,707	46,000	55,000
Asst professor	26	37,659	7,747	33,000	35,700	43,000

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

Table 4.4.2

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and WORK SPECIALTY - 11 or 12 Month Contract
1991 ACS Salary Survey

ACADEMIC RANK & WORK SPECIALTY	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Biochemistry						
Full professor	85	83,231	28,993	65,000	80,000	97,500
Assoc professor	36	53,539	8,254	48,000	51,650	57,500
Asst professor	33	43,906	11,035	37,000	42,700	47,400
Research appt	27	34,881	10,354	26,000	35,000	45,000
Agricultural chemistry						
Full professor	18	73,835	15,092	65,000	69,200	84,000
Analytical chemistry						
Research appt	16	41,324	6,412	37,500	40,758	45,500
Inorganic chemistry						
Full professor	19	75,505	24,815	55,009	75,600	90,000
Medicinal-Pharmaceutical						
Full professor	17	78,467	15,467	68,000	76,000	93,000
Physical chemistry						
Full professor	21	82,673	26,867	66,000	82,000	95,400
Other chemical science						
Full professor	28	72,955	27,481	57,268	66,000	80,250
Assoc professor	16	54,449	13,085	41,500	56,900	66,893
Asst professor	18	41,779	10,047	38,000	38,890	42,000
Research appt	23	38,408	12,473	30,000	36,000	47,000
Other nonchemistry						
Full professor	27	86,745	25,254	63,500	85,000	96,000
Other nonfaculty	17	62,552	21,183	45,900	66,000	75,000

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & TENURE STATUS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Tenured						
Full professor	530	56,808	16,412	45,000	53,900	65,000
Assoc professor	174	42,641	8,420	37,000	41,680	46,300
Not tenured, in tenure track						
Assoc professor	22	36,748	10,661	29,200	33,150	36,500
Asst professor	183	34,791	5,911	31,000	34,000	38,000
Not tenured, not in tenure track						
Instructor	19	27,500	9,936	22,000	26,000	30,000

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & TENURE STATUS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Tenured						
Full professor	209	79,949	26,754	62,000	76,000	94,440
Assoc professor	53	56,557	14,375	48,000	54,000	60,000
Not tenured, in tenure track						
Asst professor	55	44,880	14,188	38,000	42,500	49,000
Not tenured, not in tenure track						
Asst professor	22	43,825	12,348	35,000	41,000	45,000
Research appt	55	40,596	15,845	31,400	38,100	46,000
Not applicable						
Research appt	35	34,772	11,724	25,000	36,000	46,237
Other nonfaculty	28	60,028	32,657	40,800	50,800	70,393

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & INST CONTROL	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Public						
Full professor	349	57,392	15,351	46,000	54,000	64,000
Assoc professor	119	42,854	8,385	37,000	41,560	46,736
Asst professor	136	35,602	5,966	31,900	34,684	38,000
Instructor	18	27,122	9,832	22,000	25,500	29,800
No ranks	15	39,747	10,020	35,000	38,000	46,000
Private						
Full professor	193	54,957	18,116	42,450	51,000	65,000
Assoc professor	83	40,312	9,235	33,800	39,500	45,000
Asst professor	65	32,126	5,208	28,500	31,000	35,000

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & INST CONTROL	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Public						
Full professor	179	80,189	24,444	65,000	76,600	94,000
Assoc professor	45	56,739	9,453	50,000	54,800	63,949
Asst professor	45	45,604	12,899	40,000	43,320	48,500
Instructor	16	49,996	21,083	34,000	44,550	67,808
Research appt	62	38,527	11,001	31,400	38,000	46,000
Other nonfaculty	30	49,817	22,038	33,500	46,950	65,000
Private						
Full professor	49	76,091	31,419	53,800	70,000	96,000
Assoc professor	30	56,162	18,409	46,000	53,000	64,000
Asst professor	38	42,494	13,649	33,500	39,240	45,000
Research appt	34	39,188	19,754	27,500	36,950	47,000
Other nonfaculty	15	72,666	37,433	43,000	60,000	95,000

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & TYPE OF INST	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
AA-granting						
No ranks	16	38,763	10,450	33,000	37,954	43,925
BS-granting						
Full professor	163	46,294	10,188	39,000	45,125	52,000
Assoc professor	69	36,396	6,262	33,000	35,500	39,900
Asst professor	68	31,189	4,247	28,320	30,800	33,450
MS-granting						
Full professor	78	51,786	8,734	44,800	50,000	60,000
Assoc professor	24	40,396	5,820	35,550	39,500	44,250
Asst professor	30	33,543	3,928	31,000	34,000	36,000
PhD-granting						
Full professor	289	63,987	17,330	52,000	60,000	73,000
Assoc professor	92	46,353	8,538	39,504	44,375	52,000
Asst professor	99	37,172	6,269	33,000	36,000	40,000
Instructor	15	28,745	9,072	22,000	27,500	34,000

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & TYPE OF INST	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BS-granting						
Full professor	24	55,133	18,214	40,500	54,405	67,065
MS-granting						
Full professor	17	67,870	15,102	57,036	64,000	73,000
PhD-granting						
Full professor	133	84,021	26,415	68,000	80,000	96,000
Assoc professor	29	54,324	9,209	48,000	53,000	57,800
Asst professor	44	44,434	8,130	39,800	42,850	47,700
Instructor	14	48,353	19,296	29,000	47,050	58,000
Research appt	79	39,014	15,569	29,000	38,000	47,000
Other nonfaculty	32	56,862	24,115	39,750	48,000	72,393
Medical school						
Full professor	52	83,249	23,939	65,720	82,000	99,500
Assoc professor	37	60,324	15,804	51,000	58,000	68,000
Asst professor	28	48,458	18,620	38,000	43,500	52,968

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

Table 4.8.1

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and TYPE OF INSTITUTION - 9 or 10 Month Contract
1991 ACS Salary Survey

ACADEMIC RANK & TYPE OF INST	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Public						
AA-granting						
No ranks	15	39,747	10,020	35,000	38,000	46,000
BS-granting						
Full professor	68	48,079	8,808	42,500	46,250	53,165
Assoc professor	24	39,228	6,704	34,750	37,688	42,500
Asst professor	24	33,243	4,247	30,300	32,000	36,050
MS-granting						
Full professor	65	52,754	8,724	45,054	52,618	60,000
Assoc professor	18	39,555	5,380	35,000	38,850	42,672
Asst professor	27	33,826	3,863	31,000	34,100	36,500
PhD-granting						
Full professor	204	62,611	16,786	50,000	60,000	72,111
Assoc professor	64	45,411	8,505	39,095	43,000	50,000
Asst professor	81	37,135	6,586	33,000	36,000	39,000
Private						
BS-granting						
Full professor	95	45,017	10,938	36,956	45,000	50,000
Assoc professor	45	34,886	5,513	31,000	34,993	39,600
Asst professor	44	30,069	3,850	27,750	29,883	31,825
PhD-granting						
Full professor	85	67,291	18,251	55,000	65,000	74,000
Assoc professor	28	48,506	8,367	42,618	48,750	54,700
Asst professor	18	37,343	4,732	33,000	37,750	40,000

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

Table 4.8.2

SALARIES of PhD ACADEMIC CHEMISTS employed FULL-TIME
by RANK and TYPE OF INSTITUTION - 11 or 12 Month Contract
1991 ACS Salary Survey

ACADEMIC RANK & TYPE OF INST	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Public						
PhD-granting						
Full professor	118	82,151	26,318	67,500	76,940	94,440
Assoc professor	20	53,381	7,788	47,750	52,500	57,000
Asst professor	29	44,561	5,933	40,000	43,320	48,500
Research appt	52	38,791	11,622	30,700	38,500	46,619
Other nonfaculty	20	51,480	19,491	37,250	46,950	65,500
Medical school						
Full professor	35	82,670	20,492	66,800	82,000	99,000
Assoc professor	23	58,952	10,241	51,000	58,800	68,000
Private						
PhD-granting						
Full professor	15	98,733	23,008	85,000	93,000	118,000
Asst professor	15	44,190	11,511	38,000	41,000	45,000
Research appt	27	39,444	21,493	27,500	37,900	47,000
Medical school						
Full professor	17	84,441	30,531	61,000	82,000	100,000
Asst professor	15	47,127	15,794	34,500	42,000	55,000

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & SEX	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Men						
Full professor	506	57,048	16,533	45,054	54,000	65,000
Assoc professor	169	41,851	8,846	35,500	40,000	46,000
Asst professor	156	34,644	5,788	31,000	34,000	38,000
Instructor	19	30,521	7,998	24,000	28,800	34,000
Women						
Full professor	36	49,166	12,676	40,025	45,063	59,950
Assoc professor	33	41,595	8,767	36,000	41,000	46,000
Asst professor	45	33,903	6,504	29,300	32,000	36,000

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & SEX	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Men						
Full professor	212	80,153	26,258	62,000	76,940	94,000
Assoc professor	66	56,344	14,108	48,000	54,000	63,949
Asst professor	60	46,003	14,400	38,240	42,600	49,420
Research appt	75	40,624	14,995	31,400	39,000	47,000
Other nonfaculty	39	60,661	30,556	39,500	55,000	75,000
Women						
Full professor	16	68,116	21,212	56,000	66,220	72,500
Asst professor	23	39,425	8,146	32,000	40,000	46,200
Research appt	21	32,111	11,050	23,000	30,700	41,000

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & GEOGRAPHIC REGION	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific						
Full professor	79	63,867	17,122	51,000	60,000	72,000
Assoc professor	23	45,011	9,827	38,000	45,000	51,316
Mountain						
Full professor	44	50,642	11,703	41,750	50,000	59,500
West North Central						
Full professor	33	52,156	17,436	43,500	46,640	56,000
Assoc professor	21	39,826	9,679	34,675	36,650	44,550
Asst professor	22	34,227	7,770	29,100	32,000	37,800
West South Central						
Full professor	43	47,511	11,367	39,000	45,054	52,000
Asst professor	17	33,640	5,880	31,000	32,090	35,000
East North Central						
Full professor	95	56,025	16,216	45,500	51,900	62,000
Assoc professor	38	39,558	6,575	35,000	38,813	43,300
Asst professor	36	34,367	6,175	30,400	32,500	36,850
East South Central						
Full professor	29	44,800	11,653	39,500	43,599	50,000
Middle Atlantic						
Full professor	89	62,108	19,039	50,000	57,000	72,222
Assoc professor	36	44,437	8,314	37,700	43,940	48,210
Asst professor	36	34,085	5,016	30,050	34,600	38,000
South Atlantic						
Full professor	74	55,226	14,746	44,800	52,850	60,000
Assoc professor	26	39,939	9,408	34,000	39,350	42,600
Asst professor	40	34,819	6,098	29,800	34,784	38,000
New England						
Full professor	52	59,890	12,097	51,000	58,838	68,000
Assoc professor	22	49,358	8,034	44,000	49,250	54,500
Asst professor	16	34,069	6,371	29,820	35,500	38,250

Note: Cells 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
1991 ACS Salary Survey

ACADEMIC RANK & GEOGRAPHIC REGION	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Pacific						
Full professor	27	91,821	42,795	70,920	75,000	115,000
Research appt	23	42,131	21,883	26,600	41,600	47,000
West North Central						
Full professor	27	70,535	20,211	54,000	66,000	85,000
West South Central						
Full professor	28	77,224	24,447	61,500	78,000	88,500
East North Central						
Full professor	44	78,735	20,786	64,750	78,500	96,150
Middle Atlantic						
Full professor	29	81,315	28,215	63,600	76,500	95,366
Assoc professor	16	56,161	10,137	49,000	55,938	64,500
Asst professor	17	40,253	9,023	34,000	38,000	42,000
South Atlantic						
Full professor	39	77,961	21,175	60,441	77,500	93,000
Assoc professor	16	52,823	9,974	47,500	53,500	58,000
Asst professor	17	43,758	10,359	37,000	42,500	48,000
Research appt	17	40,963	12,276	33,000	39,000	48,000

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

Table 5.1.1

STIPENDS of POSTDOCTORAL FELLOWS
by INSTITUTIONAL CONTROL and WORK SPECIALTY
1991 ACS Salary Survey

INST CONTROL & WORK SPECIALTY	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
Biochemistry						
Total	39	22,830	4,050	19,000	23,500	26,000
Public	23	21,808	4,058	19,000	21,380	25,000
Private	16	24,299	3,673	22,250	25,000	26,750
Chemistry						
Total	131	22,073	3,531	19,500	21,000	25,000
Public	82	22,148	3,686	19,400	21,000	25,000
Private	49	21,947	3,288	19,850	21,800	25,000

Note: Cells 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
1991 ACS Salary Survey

HIGHEST DEGREE & YEARS SINCE BS	Count	Mean	Std Dev	25th %-ile	50th %-ile	75th %-ile
BS						
Total	197	61,679	37,338	39,900	52,000	68,000
2-4	17	35,139	4,472	33,000	36,250	37,500
5-9	44	42,443	9,109	35,500	40,000	50,000
10-14	25	49,789	12,614	41,760	47,700	55,480
15-19	19	51,792	12,191	45,000	50,000	60,000
30-34	21	76,151	18,572	64,000	78,250	86,000
35-39	18	100,028	74,435	53,000	64,700	120,000
40 or more	24	88,597	50,775	56,308	66,500	98,000
MS						
Total	181	62,796	24,616	48,350	57,000	70,000
5-9	27	43,588	6,989	39,000	41,000	48,464
10-14	42	55,061	11,889	48,540	52,500	60,000
15-19	17	58,682	14,126	51,600	55,300	64,200
20-24	19	57,224	16,564	44,000	59,000	66,000
25-29	20	76,415	28,710	57,750	68,800	83,900
30-34	16	75,716	21,699	63,500	72,500	90,180
35-39	16	83,550	35,186	63,900	70,850	93,100
40 or more	21	75,791	32,413	51,350	67,140	96,000
PhD						
Total	197	76,765	30,361	57,000	70,000	90,000
5-9	17	55,137	7,116	51,000	53,280	57,000
10-14	39	56,647	9,551	50,830	55,200	60,300
15-19	36	67,186	15,725	58,000	64,890	75,000
20-24	25	87,995	29,170	65,800	75,000	115,000
25-29	37	83,859	21,506	71,400	80,040	92,000
30-34	23	104,035	27,222	85,000	100,000	120,000

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

Table 7.1.1

EMPLOYMENT STATUS OF ALL RESPONDENTS
by WORK SPECIALTY
1991 Survey of ACS Members

WORK SPECIALTY	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Chemical engineering	517	5	4	7	13	1	547
Row Percent	94.5%	.9%	.7%	1.3%	2.4%	.2%	100.0%
Column Percent	5.7%	2.9%	1.7%	4.3%	7.3%	8.3%	5.5%
Biochemistry	509	9	45	11	7	1	582
Row Percent	87.5%	1.5%	7.7%	1.9%	1.2%	.2%	100.0%
Column Percent	5.6%	5.2%	19.0%	6.8%	4.0%	8.3%	5.9%
Biotechnology	208	2	8	4	1	0	223
Row Percent	93.3%	.9%	3.6%	1.8%	.4%	.0%	100.0%
Column Percent	2.3%	1.1%	3.4%	2.5%	.6%	.0%	2.3%
General chemistry	440	20	0	8	14	1	483
Row Percent	91.1%	4.1%	.0%	1.7%	2.9%	.2%	100.0%
Column Percent	4.8%	11.5%	.0%	4.9%	7.9%	8.3%	4.9%
Agricultural chemistry	236	9	4	4	4	0	257
Row Percent	91.8%	3.5%	1.6%	1.6%	1.6%	.0%	100.0%
Column Percent	2.6%	5.2%	1.7%	2.5%	2.3%	.0%	2.6%
Analytical chemistry	1553	22	15	17	17	0	1624
Row Percent	95.6%	1.4%	.9%	1.0%	1.0%	.0%	100.0%
Column Percent	17.1%	12.6%	6.3%	10.5%	9.6%	.0%	16.5%
Clinical chemistry	90	1	1	0	2	0	94
Row Percent	95.7%	1.1%	1.1%	.0%	2.1%	.0%	100.0%
Column Percent	1.0%	.6%	.4%	.0%	1.1%	.0%	1.0%
Environmental chemistry	705	9	4	14	10	0	742
Row Percent	95.0%	1.2%	.5%	1.9%	1.3%	.0%	100.0%
Column Percent	7.7%	5.2%	1.7%	8.6%	5.6%	.0%	7.5%
Inorganic chemistry	345	5	26	1	1	1	379
Row Percent	91.0%	1.3%	6.9%	.3%	.3%	.3%	100.0%
Column Percent	3.8%	2.9%	11.0%	.6%	.6%	8.3%	3.8%

Table 7.1.1 (continued)

WORK SPECIALTY	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Materials science	367	7	10	12	4	3	403
Row Percent	91.1%	1.7%	2.5%	3.0%	1.0%	.7%	100.0%
Column Percent	4.0%	4.0%	4.2%	7.4%	2.3%	25.0%	4.1%
Medicinal-Pharmaceutical	474	9	21	13	3	1	521
Row Percent	91.0%	1.7%	4.0%	2.5%	.6%	.2%	100.0%
Column Percent	5.2%	5.2%	8.9%	8.0%	1.7%	8.3%	5.3%
Organic chemistry	1024	12	45	10	14	0	1105
Row Percent	92.7%	1.1%	4.1%	.9%	1.3%	.0%	100.0%
Column Percent	11.3%	6.9%	19.0%	6.2%	7.9%	.0%	11.2%
Physical chemistry	513	12	29	7	2	0	563
Row Percent	91.1%	2.1%	5.2%	1.2%	.4%	.0%	100.0%
Column Percent	5.6%	6.9%	12.2%	4.3%	1.1%	.0%	5.7%
Polymer chemistry	798	15	11	14	17	1	856
Row Percent	93.2%	1.8%	1.3%	1.6%	2.0%	.1%	100.0%
Column Percent	8.8%	8.6%	4.6%	8.6%	9.6%	8.3%	8.7%
Other chemical science	179	0	2	4	7	0	192
Row Percent	93.2%	.0%	1.0%	2.1%	3.6%	.0%	100.0%
Column Percent	2.0%	.0%	.8%	2.5%	4.0%	.0%	1.9%
Business Administration	210	4	0	6	13	0	233
Row Percent	90.1%	1.7%	.0%	2.6%	5.6%	.0%	100.0%
Column Percent	2.3%	2.3%	.0%	3.7%	7.3%	.0%	2.4%
Computer science	97	5	0	6	1	0	109
Row Percent	89.0%	4.6%	.0%	5.5%	.9%	.0%	100.0%
Column Percent	1.1%	2.9%	.0%	3.7%	.6%	.0%	1.1%
Law	53	1	0	0	3	1	58
Row Percent	91.4%	1.7%	.0%	.0%	5.2%	1.7%	100.0%
Column Percent	.6%	.6%	.0%	.0%	1.7%	8.3%	.6%
Other nonchemistry	495	22	4	12	14	0	547
Row Percent	90.5%	4.0%	.7%	2.2%	2.6%	.0%	100.0%
Column Percent	5.4%	12.6%	1.7%	7.4%	7.9%	.0%	5.5%
No Answer	284	5	8	12	30	2	341
Row Percent	83.3%	1.5%	2.3%	3.5%	8.8%	.6%	100.0%
Column Percent	3.1%	2.9%	3.4%	7.4%	16.9%	16.7%	3.5%
Total	9097	174	237	162	177	12	9859
Row Percent	92.3%	1.8%	2.4%	1.6%	1.8%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 7.1.2

EMPLOYMENT STATUS OF ALL RESPONDENTS
by EMPLOYER TYPE
1991 Survey of ACS Members

EMPLOYER TYPE	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Industry	5771	43	10	108	90	2	6024
Row Percent	95.8%	.7%	.2%	1.8%	1.5%	.0%	100.0%
Column Percent	63.4%	24.7%	4.2%	66.7%	50.8%	16.7%	61.1%
Government	710	9	25	9	16	0	769
Row Percent	92.3%	1.2%	3.3%	1.2%	2.1%	.0%	100.0%
Column Percent	7.8%	5.2%	10.5%	5.6%	9.0%	.0%	7.8%
Other Nonacademic	463	54	9	12	20	5	563
Row Percent	82.2%	9.6%	1.6%	2.1%	3.6%	.9%	100.0%
Column Percent	5.1%	31.0%	3.8%	7.4%	11.3%	41.7%	5.7%
High School	124	5	0	1	9	0	139
Row Percent	89.2%	3.6%	.0%	.7%	6.5%	.0%	100.0%
Column Percent	1.4%	2.9%	.0%	.6%	5.1%	.0%	1.4%
College or University	1957	60	187	22	26	2	2254
Row Percent	86.8%	2.7%	8.3%	1.0%	1.2%	.1%	100.0%
Column Percent	21.5%	34.5%	78.9%	13.6%	14.7%	16.7%	22.9%
No Answer	72	3	6	10	16	3	110
Row Percent	65.5%	2.7%	5.5%	9.1%	14.5%	2.7%	100.0%
Column Percent	.8%	1.7%	2.5%	6.2%	9.0%	25.0%	1.1%
Total	9097	174	237	162	177	12	9859
Row Percent	92.3%	1.8%	2.4%	1.6%	1.8%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.1.1

EMPLOYMENT STATUS OF ALL CHEMISTS
by HIGHEST DEGREE
1991 Survey of ACS Members

HIGHEST DEGREE	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
BS	1903	43	3	41	45	1	2036
Row Percent	93.5%	2.1%	.1%	2.0%	2.2%	.0%	100.0%
Column Percent	23.7%	27.9%	1.3%	30.4%	35.7%	11.1%	23.5%
MS	1431	30	2	26	30	0	1519
Row Percent	94.2%	2.0%	.1%	1.7%	2.0%	.0%	100.0%
Column Percent	17.8%	19.5%	.9%	19.3%	23.8%	.0%	17.5%
PhD	4634	77	217	67	50	8	5053
Row Percent	91.7%	1.5%	4.3%	1.3%	1.0%	.2%	100.0%
Column Percent	57.7%	50.0%	97.3%	49.6%	39.7%	88.9%	58.3%
No Answer	58	4	1	1	1	0	65
Row Percent	89.2%	6.2%	1.5%	1.5%	1.5%	.0%	100.0%
Column Percent	.7%	2.6%	.4%	.7%	.8%	.0%	.7%
Total	8026	154	223	135	126	9	8673
Row Percent	92.5%	1.8%	2.6%	1.6%	1.5%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.1.2

EMPLOYMENT STATUS OF MEN CHEMISTS
by HIGHEST DEGREE
1991 Survey of ACS Members

HIGHEST DEGREE	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
BS	1367	19	1	27	32	1	1447
Row Percent	94.5%	1.3%	.1%	1.9%	2.2%	.1%	100.0%
Column Percent	20.8%	22.1%	.6%	26.0%	34.4%	14.3%	20.6%
MS	1081	14	1	21	20	0	1137
Row Percent	95.1%	1.2%	.1%	1.8%	1.8%	.0%	100.0%
Column Percent	16.5%	16.3%	.6%	20.2%	21.5%	.0%	16.2%
PhD	4070	49	171	55	40	6	4391
Row Percent	92.7%	1.1%	3.9%	1.3%	.9%	.1%	100.0%
Column Percent	62.0%	57.0%	98.3%	52.9%	43.0%	85.7%	62.5%
No Answer	48	4	1	1	1	0	55
Row Percent	87.3%	7.3%	1.8%	1.8%	1.8%	.0%	100.0%
Column Percent	.7%	4.7%	.6%	1.0%	1.1%	.0%	.8%
Total	6566	86	174	104	93	7	7030
Row Percent	93.4%	1.2%	2.5%	1.5%	1.3%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.1.3

EMPLOYMENT STATUS OF WOMEN CHEMISTS
by HIGHEST DEGREE
1991 Survey of ACS Members

HIGHEST DEGREE	EMPLOYMENT STATUS					Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	
BS	533	24	2	14	13	586
Row Percent	91.0%	4.1%	.3%	2.4%	2.2%	100.0%
Column Percent	36.9%	35.3%	4.1%	45.2%	40.6%	36.0%
MS	344	16	1	5	9	375
Row Percent	91.7%	4.3%	.3%	1.3%	2.4%	100.0%
Column Percent	23.8%	23.5%	2.0%	16.1%	28.1%	23.1%
PhD	559	28	46	12	10	655
Row Percent	85.3%	4.3%	7.0%	1.8%	1.5%	100.0%
Column Percent	38.7%	41.2%	93.9%	38.7%	31.3%	40.3%
No Answer	10	0	0	0	0	10
Row Percent	100.0%	.0%	.0%	.0%	.0%	100.0%
Column Percent	.7%	.0%	.0%	.0%	.0%	.6%
Total	1446	68	49	31	32	1626
Row Percent	88.9%	4.2%	3.0%	1.9%	2.0%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.2.1

EMPLOYMENT STATUS OF ALL CHEMISTS
by AGE
1991 Survey of ACS Members

AGE	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
20-24	96	0	1	2	1	0	100
Row Percent	96.0%	.0%	1.0%	2.0%	1.0%	.0%	100.0%
Column Percent	1.2%	.0%	.4%	1.5%	.8%	.0%	1.2%
25-29	645	8	85	6	13	0	757
Row Percent	85.2%	1.1%	11.2%	.8%	1.7%	.0%	100.0%
Column Percent	8.0%	5.2%	38.1%	4.4%	10.3%	.0%	8.7%
30-34	1281	18	83	24	5	0	1411
Row Percent	90.8%	1.3%	5.9%	1.7%	.4%	.0%	100.0%
Column Percent	16.0%	11.7%	37.2%	17.8%	4.0%	.0%	16.3%
35-39	1298	24	36	31	9	2	1400
Row Percent	92.7%	1.7%	2.6%	2.2%	.6%	.1%	100.0%
Column Percent	16.2%	15.6%	16.1%	23.0%	7.1%	22.2%	16.1%
40-44	1151	17	8	12	3	2	1193
Row Percent	96.5%	1.4%	.7%	1.0%	.3%	.2%	100.0%
Column Percent	14.3%	11.0%	3.6%	8.9%	2.4%	22.2%	13.8%
45-49	1192	11	2	17	6	1	1229
Row Percent	97.0%	.9%	.2%	1.4%	.5%	.1%	100.0%
Column Percent	14.9%	7.1%	.9%	12.6%	4.8%	11.1%	14.2%
50-54	932	15	6	18	9	0	980
Row Percent	95.1%	1.5%	.6%	1.8%	.9%	.0%	100.0%
Column Percent	11.6%	9.7%	2.7%	13.3%	7.1%	.0%	11.3%
55-59	709	14	1	10	15	1	750
Row Percent	94.5%	1.9%	.1%	1.3%	2.0%	.1%	100.0%
Column Percent	8.8%	9.1%	.4%	7.4%	11.9%	11.1%	8.6%
60-64	544	25	0	14	39	0	622
Row Percent	87.5%	4.0%	.0%	2.3%	6.3%	.0%	100.0%
Column Percent	6.8%	16.2%	.0%	10.4%	31.0%	.0%	7.2%

Table 8.2.1 (continued)

AGE	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
65-69	147	22	0	1	24	1	195
Row Percent	75.4%	11.3%	.0%	.5%	12.3%	.5%	100.0%
Column Percent	1.8%	14.3%	.0%	.7%	19.0%	11.1%	2.2%
70 or more	1	0	0	0	1	0	2
Row Percent	50.0%	.0%	.0%	.0%	50.0%	.0%	100.0%
Column Percent	.0%	.0%	.0%	.0%	.8%	.0%	.0%
No Answer	30	0	1	0	1	2	34
Row Percent	88.2%	.0%	2.9%	.0%	2.9%	5.9%	100.0%
Column Percent	.4%	.0%	.4%	.0%	.8%	22.2%	.4%
Total	8026	154	223	135	126	9	8673
Row Percent	92.5%	1.8%	2.6%	1.6%	1.5%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.3.1

EMPLOYMENT STATUS OF ALL CHEMISTS
by RACE-ETHNICITY
1991 Survey of ACS Members

RACE/ETHNICITY	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
American Indian	34	0	0	1	0	0	35
Row Percent	97.1%	.0%	.0%	2.9%	.0%	.0%	100.0%
Column Percent	.4%	.0%	.0%	.7%	.0%	.0%	.4%
Asian	582	6	63	16	1	1	669
Row Percent	87.0%	.9%	9.4%	2.4%	.1%	.1%	100.0%
Column Percent	7.3%	3.9%	28.3%	11.9%	.8%	11.1%	7.7%
Black	98	0	3	2	3	0	106
Row Percent	92.5%	.0%	2.8%	1.9%	2.8%	.0%	100.0%
Column Percent	1.2%	.0%	1.3%	1.5%	2.4%	.0%	1.2%
White	7095	147	143	108	117	6	7616
Row Percent	93.2%	1.9%	1.9%	1.4%	1.5%	.1%	100.0%
Column Percent	88.4%	95.5%	64.1%	80.0%	92.9%	66.7%	87.8%
Hispanic	119	0	10	4	3	0	136
Row Percent	87.5%	.0%	7.4%	2.9%	2.2%	.0%	100.0%
Column Percent	1.5%	.0%	4.5%	3.0%	2.4%	.0%	1.6%
Other	47	0	4	2	0	0	53
Row Percent	88.7%	.0%	7.5%	3.8%	.0%	.0%	100.0%
Column Percent	.6%	.0%	1.8%	1.5%	.0%	.0%	.6%
No Answer	51	1	0	2	2	2	58
Row Percent	87.9%	1.7%	.0%	3.4%	3.4%	3.4%	100.0%
Column Percent	.6%	.6%	.0%	1.5%	1.6%	22.2%	.7%
Total	8026	154	223	135	126	9	8673
Row Percent	92.5%	1.8%	2.6%	1.6%	1.5%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.4.1

EMPLOYMENT STATUS OF ALL CHEMISTS
by CITIZENSHIP
1991 Survey of ACS Members

CITIZENSHIP	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Native	6863	139	127	103	109	6	7347
Row Percent	93.4%	1.9%	1.7%	1.4%	1.5%	.1%	100.0%
Column Percent	85.5%	90.3%	57.0%	76.3%	86.5%	66.7%	84.7%
Naturalized	682	8	5	13	13	1	722
Row Percent	94.5%	1.1%	.7%	1.8%	1.8%	.1%	100.0%
Column Percent	8.5%	5.2%	2.2%	9.6%	10.3%	11.1%	8.3%
Permanent resident	362	4	22	14	3	0	405
Row Percent	89.4%	1.0%	5.4%	3.5%	.7%	.0%	100.0%
Column Percent	4.5%	2.6%	9.9%	10.4%	2.4%	.0%	4.7%
Other visa	105	3	69	5	0	0	182
Row Percent	57.7%	1.6%	37.9%	2.7%	.0%	.0%	100.0%
Column Percent	1.3%	1.9%	30.9%	3.7%	.0%	.0%	2.1%
No Answer	14	0	0	0	1	2	17
Row Percent	82.4%	.0%	.0%	.0%	5.9%	11.8%	100.0%
Column Percent	.2%	.0%	.0%	.0%	.8%	22.2%	.2%
Total	8026	154	223	135	126	9	8673
Row Percent	92.5%	1.8%	2.6%	1.6%	1.5%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.5.1

EMPLOYMENT STATUS OF ALL CHEMISTS
by EMPLOYER
1991 Survey of ACS Members

EMPLOYER TYPE	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Industry	5068	40	10	92	67	1	5278
Row Percent	96.0%	.8%	.2%	1.7%	1.3%	.0%	100.0%
Column Percent	63.1%	26.0%	4.5%	68.1%	53.2%	11.1%	60.9%
Government	627	9	23	8	14	0	681
Row Percent	92.1%	1.3%	3.4%	1.2%	2.1%	.0%	100.0%
Column Percent	7.8%	5.8%	10.3%	5.9%	11.1%	.0%	7.9%
Other Nonacademic	387	43	7	8	15	5	465
Row Percent	83.2%	9.2%	1.5%	1.7%	3.2%	1.1%	100.0%
Column Percent	4.8%	27.9%	3.1%	5.9%	11.9%	55.6%	5.4%
High School	109	4	0	0	7	0	120
Row Percent	90.8%	3.3%	.0%	.0%	5.8%	.0%	100.0%
Column Percent	1.4%	2.6%	.0%	.0%	5.6%	.0%	1.4%
College or University	1770	55	177	20	19	1	2042
Row Percent	86.7%	2.7%	8.7%	1.0%	.9%	.0%	100.0%
Column Percent	22.1%	35.7%	79.4%	14.8%	15.1%	11.1%	23.5%
No Answer	65	3	6	7	4	2	87
Row Percent	74.7%	3.4%	6.9%	8.0%	4.6%	2.3%	100.0%
Column Percent	.8%	1.9%	2.7%	5.2%	3.2%	22.2%	1.0%
Total	8026	154	223	135	126	9	8673
Row Percent	92.5%	1.8%	2.6%	1.6%	1.5%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.5.2

EMPLOYMENT STATUS OF INDUSTRIAL CHEMISTS
by EMPLOYER
1991 Survey of ACS Members

INDUSTRY	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Analytical service lab	288	2	1	3	5	0	299
Row Percent	96.3%	.7%	.3%	1.0%	1.7%	.0%	100.0%
Column Percent	5.7%	5.0%	10.0%	3.3%	7.5%	.0%	5.7%
Contract research firm	139	4	2	0	2	0	147
Row Percent	94.6%	2.7%	1.4%	.0%	1.4%	.0%	100.0%
Column Percent	2.7%	10.0%	20.0%	.0%	3.0%	.0%	2.8%
Legal firm	14	0	0	0	1	0	15
Row Percent	93.3%	.0%	.0%	.0%	6.7%	.0%	100.0%
Column Percent	.3%	.0%	.0%	.0%	1.5%	.0%	.3%
Utility	66	0	0	1	0	0	67
Row Percent	98.5%	.0%	.0%	1.5%	.0%	.0%	100.0%
Column Percent	1.3%	.0%	.0%	1.1%	.0%	.0%	1.3%
Other Nonmanuf	231	6	1	10	4	0	252
Row Percent	91.7%	2.4%	.4%	4.0%	1.6%	.0%	100.0%
Column Percent	4.6%	15.0%	10.0%	10.9%	6.0%	.0%	4.8%
Aerospace	124	0	0	8	1	0	133
Row Percent	93.2%	.0%	.0%	6.0%	.8%	.0%	100.0%
Column Percent	2.4%	.0%	.0%	8.7%	1.5%	.0%	2.5%
Basic chemicals	288	2	0	3	1	0	294
Row Percent	98.0%	.7%	.0%	1.0%	.3%	.0%	100.0%
Column Percent	5.7%	5.0%	.0%	3.3%	1.5%	.0%	5.6%
Specialty chems	688	2	0	15	6	0	711
Row Percent	96.8%	.3%	.0%	2.1%	.8%	.0%	100.0%
Column Percent	13.6%	5.0%	.0%	16.3%	9.0%	.0%	13.5%
Agricultural chems	164	1	0	2	6	0	173
Row Percent	94.8%	.6%	.0%	1.2%	3.5%	.0%	100.0%
Column Percent	3.2%	2.5%	.0%	2.2%	9.0%	.0%	3.3%
Biochemical prods	71	0	1	1	0	0	73
Row Percent	97.3%	.0%	1.4%	1.4%	.0%	.0%	100.0%
Column Percent	1.4%	.0%	10.0%	1.1%	.0%	.0%	1.4%
Coatings	198	1	0	4	2	0	205
Row Percent	96.6%	.5%	.0%	2.0%	1.0%	.0%	100.0%
Column Percent	3.9%	2.5%	.0%	4.3%	3.0%	.0%	3.9%
Electronics	151	1	0	6	0	0	158
Row Percent	95.6%	.6%	.0%	3.8%	.0%	.0%	100.0%
Column Percent	3.0%	2.5%	.0%	6.5%	.0%	.0%	3.0%

Table 8.5.2 (continued)

INDUSTRY	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Food	143	1	0	2	0	0	146
Row Percent	97.9%	.7%	.0%	1.4%	.0%	.0%	100.0%
Column Percent	2.8%	2.5%	.0%	2.2%	.0%	.0%	2.8%
Glass	38	0	0	0	0	0	38
Row Percent	100.0%	.0%	.0%	.0%	.0%	.0%	100.0%
Column Percent	.7%	.0%	.0%	.0%	.0%	.0%	.7%
Instruments	121	2	0	6	0	0	129
Row Percent	93.8%	1.6%	.0%	4.7%	.0%	.0%	100.0%
Column Percent	2.4%	5.0%	.0%	6.5%	.0%	.0%	2.4%
Medical devices	185	1	0	4	0	0	190
Row Percent	97.4%	.5%	.0%	2.1%	.0%	.0%	100.0%
Column Percent	3.7%	2.5%	.0%	4.3%	.0%	.0%	3.6%
Metals	64	1	0	1	2	0	68
Row Percent	94.1%	1.5%	.0%	1.5%	2.9%	.0%	100.0%
Column Percent	1.3%	2.5%	.0%	1.1%	3.0%	.0%	1.3%
Paper	58	2	0	1	3	0	64
Row Percent	90.6%	3.1%	.0%	1.6%	4.7%	.0%	100.0%
Column Percent	1.1%	5.0%	.0%	1.1%	4.5%	.0%	1.2%
Petroleum	209	0	1	2	0	1	213
Row Percent	98.1%	.0%	.5%	.9%	.0%	.5%	100.0%
Column Percent	4.1%	.0%	10.0%	2.2%	.0%	100.0%	4.0%
Pharmaceuticals	937	8	4	12	15	0	976
Row Percent	96.0%	.8%	.4%	1.2%	1.5%	.0%	100.0%
Column Percent	18.5%	20.0%	40.0%	13.0%	22.4%	.0%	18.5%
Plastics	238	2	0	3	5	0	248
Row Percent	96.0%	.8%	.0%	1.2%	2.0%	.0%	100.0%
Column Percent	4.7%	5.0%	.0%	3.3%	7.5%	.0%	4.7%
Rubber	88	0	0	1	1	0	90
Row Percent	97.8%	.0%	.0%	1.1%	1.1%	.0%	100.0%
Column Percent	1.7%	.0%	.0%	1.1%	1.5%	.0%	1.7%
Soaps	69	1	0	0	2	0	72
Row Percent	95.8%	1.4%	.0%	.0%	2.8%	.0%	100.0%
Column Percent	1.4%	2.5%	.0%	.0%	3.0%	.0%	1.4%
Other manufactures	496	3	0	7	11	0	517
Row Percent	95.9%	.6%	.0%	1.4%	2.1%	.0%	100.0%
Column Percent	9.8%	7.5%	.0%	7.6%	16.4%	.0%	9.8%
Total	5068	40	10	92	67	1	5278
Row Percent	96.0%	.8%	.2%	1.7%	1.3%	.0%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.5.3

EMPLOYMENT STATUS OF ACADEMIC CHEMISTS
by INSTITUTIONAL TYPE
1991 Survey of ACS Members

INSTITUTIONAL TYPE	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
AA-granting	129	13	0	0	4	0	146
Row Percent	88.4%	8.9%	.0%	.0%	2.7%	.0%	100.0%
Column Percent	7.3%	23.6%	.0%	.0%	21.1%	.0%	7.1%
BS-granting	382	14	0	4	4	0	404
Row Percent	94.6%	3.5%	.0%	1.0%	1.0%	.0%	100.0%
Column Percent	21.6%	25.5%	.0%	20.0%	21.1%	.0%	19.8%
MS-granting	179	4	1	3	3	0	190
Row Percent	94.2%	2.1%	.5%	1.6%	1.6%	.0%	100.0%
Column Percent	10.1%	7.3%	.6%	15.0%	15.8%	.0%	9.3%
PhD-granting	908	22	164	12	4	0	1110
Row Percent	81.8%	2.0%	14.8%	1.1%	.4%	.0%	100.0%
Column Percent	51.3%	40.0%	92.7%	60.0%	21.1%	.0%	54.4%
Medical school	172	2	12	1	4	1	192
Row Percent	89.6%	1.0%	6.3%	.5%	2.1%	.5%	100.0%
Column Percent	9.7%	3.6%	6.8%	5.0%	21.1%	100.0%	9.4%
Total	1770	55	177	20	19	1	2042
Row Percent	86.7%	2.7%	8.7%	1.0%	.9%	.0%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.6.1

EMPLOYMENT STATUS OF NON-ACADEMIC CHEMISTS
by WORK FUNCTION
1991 Survey of ACS Members

WORK FUNCTION	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
R&D Mgt	896	6	0	15	17	0	934
Row Percent	95.9%	.6%	.0%	1.6%	1.8%	.0%	100.0%
Column Percent	14.7%	6.5%	.0%	13.9%	17.7%	.0%	14.5%
Basic research	743	5	30	12	8	0	798
Row Percent	93.1%	.6%	3.8%	1.5%	1.0%	.0%	100.0%
Column Percent	12.2%	5.4%	75.0%	11.1%	8.3%	.0%	12.4%
Applied research	1924	11	9	29	19	2	1994
Row Percent	96.5%	.6%	.5%	1.5%	1.0%	.1%	100.0%
Column Percent	31.6%	12.0%	22.5%	26.9%	19.8%	33.3%	31.0%
General Mgt	514	7	0	16	8	0	545
Row Percent	94.3%	1.3%	.0%	2.9%	1.5%	.0%	100.0%
Column Percent	8.5%	7.6%	.0%	14.8%	8.3%	.0%	8.5%
Marketing	308	5	0	8	6	0	327
Row Percent	94.2%	1.5%	.0%	2.4%	1.8%	.0%	100.0%
Column Percent	5.1%	5.4%	.0%	7.4%	6.3%	.0%	5.1%
Production	504	2	0	7	5	0	518
Row Percent	97.3%	.4%	.0%	1.4%	1.0%	.0%	100.0%
Column Percent	8.3%	2.2%	.0%	6.5%	5.2%	.0%	8.1%
Health & Safety	264	5	0	4	4	0	277
Row Percent	95.3%	1.8%	.0%	1.4%	1.4%	.0%	100.0%
Column Percent	4.3%	5.4%	.0%	3.7%	4.2%	.0%	4.3%
Forensics	59	0	0	0	1	0	60
Row Percent	98.3%	.0%	.0%	.0%	1.7%	.0%	100.0%
Column Percent	1.0%	.0%	.0%	.0%	1.0%	.0%	.9%
Other lab analysis	332	5	1	5	6	0	349
Row Percent	95.1%	1.4%	.3%	1.4%	1.7%	.0%	100.0%
Column Percent	5.5%	5.4%	2.5%	4.6%	6.3%	.0%	5.4%
Teaching	17	4	0	0	0	0	21
Row Percent	81.0%	19.0%	.0%	.0%	.0%	.0%	100.0%
Column Percent	.3%	4.3%	.0%	.0%	.0%	.0%	.3%
Chem info services	78	0	0	1	4	0	83
Row Percent	94.0%	.0%	.0%	1.2%	4.8%	.0%	100.0%
Column Percent	1.3%	.0%	.0%	.9%	4.2%	.0%	1.3%

Table 8.6.1 (continued)

WORK FUNCTION	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Computers	37	1	0	2	0	0	40
Row Percent	92.5%	2.5%	.0%	5.0%	.0%	.0%	100.0%
Column Percent	.6%	1.1%	.0%	1.9%	.0%	.0%	.6%
Patents	43	2	0	0	3	1	49
Row Percent	87.8%	4.1%	.0%	.0%	6.1%	2.0%	100.0%
Column Percent	.7%	2.2%	.0%	.0%	3.1%	16.7%	.8%
Consulting	179	26	0	4	6	3	218
Row Percent	82.1%	11.9%	.0%	1.8%	2.8%	1.4%	100.0%
Column Percent	2.9%	28.3%	.0%	3.7%	6.3%	50.0%	3.4%
Other	159	12	0	4	6	0	181
Row Percent	87.8%	6.6%	.0%	2.2%	3.3%	.0%	100.0%
Column Percent	2.6%	13.0%	.0%	3.7%	6.3%	.0%	2.8%
No Answer	25	1	0	1	3	0	30
Row Percent	83.3%	3.3%	.0%	3.3%	10.0%	.0%	100.0%
Column Percent	.4%	1.1%	.0%	.9%	3.1%	.0%	.5%
Total	6082	92	40	108	96	6	6424
Row Percent	94.7%	1.4%	.6%	1.7%	1.5%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.7.1

EMPLOYMENT STATUS OF ALL CHEMISTS
by SPECIALTY
1991 Survey of ACS Members

WORK SPECIALTY	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Biochemistry	509	9	45	11	7	1	582
Row Percent	87.5%	1.5%	7.7%	1.9%	1.2%	.2%	100.0%
Column Percent	6.3%	5.8%	20.2%	8.1%	5.6%	11.1%	6.7%
Biotechnology	208	2	8	4	1	0	223
Row Percent	93.3%	.9%	3.6%	1.8%	.4%	.0%	100.0%
Column Percent	2.6%	1.3%	3.6%	3.0%	.8%	.0%	2.6%
General chemistry	440	20	0	8	14	1	483
Row Percent	91.1%	4.1%	.0%	1.7%	2.9%	.2%	100.0%
Column Percent	5.5%	13.0%	.0%	5.9%	11.1%	11.1%	5.6%
Agricultural chemistry	236	9	4	4	4	0	257
Row Percent	91.8%	3.5%	1.6%	1.6%	1.6%	.0%	100.0%
Column Percent	2.9%	5.8%	1.8%	3.0%	3.2%	.0%	3.0%
Analytical chemistry	1553	22	15	17	17	0	1624
Row Percent	95.6%	1.4%	.9%	1.0%	1.0%	.0%	100.0%
Column Percent	19.3%	14.3%	6.7%	12.6%	13.5%	.0%	18.7%
Clinical chemistry	90	1	1	0	2	0	94
Row Percent	95.7%	1.1%	1.1%	.0%	2.1%	.0%	100.0%
Column Percent	1.1%	.6%	.4%	.0%	1.6%	.0%	1.1%
Environmental chemistry	705	9	4	14	10	0	742
Row Percent	95.0%	1.2%	.5%	1.9%	1.3%	.0%	100.0%
Column Percent	8.8%	5.8%	1.8%	10.4%	7.9%	.0%	8.6%
Inorganic chemistry	345	5	26	1	1	1	379
Row Percent	91.0%	1.3%	6.9%	.3%	.3%	.3%	100.0%
Column Percent	4.3%	3.2%	11.7%	.7%	.8%	11.1%	4.4%
Materials science	367	7	10	12	4	3	403
Row Percent	91.1%	1.7%	2.5%	3.0%	1.0%	.7%	100.0%
Column Percent	4.6%	4.5%	4.5%	8.9%	3.2%	33.3%	4.6%
Medicinal-Pharmaceutical	474	9	21	13	3	1	521
Row Percent	91.0%	1.7%	4.0%	2.5%	.6%	.2%	100.0%
Column Percent	5.9%	5.8%	9.4%	9.6%	2.4%	11.1%	6.0%

Table 8.7.1 (continued)

WORK SPECIALTY	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Organic chemistry	1024	12	45	10	14	0	1105
Row Percent	92.7%	1.1%	4.1%	.9%	1.3%	.0%	100.0%
Column Percent	12.8%	7.8%	20.2%	7.4%	11.1%	.0%	12.7%
Physical chemistry	513	12	29	7	2	0	563
Row Percent	91.1%	2.1%	5.2%	1.2%	.4%	.0%	100.0%
Column Percent	6.4%	7.8%	13.0%	5.2%	1.6%	.0%	6.5%
Polymer chemistry	798	15	11	14	17	1	856
Row Percent	93.2%	1.8%	1.3%	1.6%	2.0%	.1%	100.0%
Column Percent	9.9%	9.7%	4.9%	10.4%	13.5%	11.1%	9.9%
Other chemical science	179	0	2	4	7	0	192
Row Percent	93.2%	.0%	1.0%	2.1%	3.6%	.0%	100.0%
Column Percent	2.2%	.0%	.9%	3.0%	5.6%	.0%	2.2%
Business Administration	137	3	0	4	9	0	153
Row Percent	89.5%	2.0%	.0%	2.6%	5.9%	.0%	100.0%
Column Percent	1.7%	1.9%	.0%	3.0%	7.1%	.0%	1.8%
Computer science	84	4	0	4	1	0	93
Row Percent	90.3%	4.3%	.0%	4.3%	1.1%	.0%	100.0%
Column Percent	1.0%	2.6%	.0%	3.0%	.8%	.0%	1.1%
Law	30	1	0	0	3	1	35
Row Percent	85.7%	2.9%	.0%	.0%	8.6%	2.9%	100.0%
Column Percent	.4%	.6%	.0%	.0%	2.4%	11.1%	.4%
Other nonchemistry	334	14	2	8	10	0	368
Row Percent	90.8%	3.8%	.5%	2.2%	2.7%	.0%	100.0%
Column Percent	4.2%	9.1%	.9%	5.9%	7.9%	.0%	4.2%
Total	8026	154	223	135	126	9	8673
Row Percent	92.5%	1.8%	2.6%	1.6%	1.5%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.8.1

EMPLOYMENT STATUS OF ALL CHEMISTS
by GEOGRAPHIC REGION
1991 Survey of ACS Members

GEOGRAPHIC REGION	EMPLOYMENT STATUS						Total
	Full-time	Part-time	Postdoc	Seeking empl	Not seeking empl	No Answer	
Pacific	953	22	39	25	10	1	1050
Row Percent	90.8%	2.1%	3.7%	2.4%	1.0%	.1%	100.0%
Column Percent	11.9%	14.3%	17.5%	18.5%	7.9%	11.1%	12.1%
Mountain	367	8	16	2	8	1	402
Row Percent	91.3%	2.0%	4.0%	.5%	2.0%	.2%	100.0%
Column Percent	4.6%	5.2%	7.2%	1.5%	6.3%	11.1%	4.6%
West North Central	506	14	10	4	2	0	536
Row Percent	94.4%	2.6%	1.9%	.7%	.4%	.0%	100.0%
Column Percent	6.3%	9.1%	4.5%	3.0%	1.6%	.0%	6.2%
West South Central	578	6	10	5	6	0	605
Row Percent	95.5%	1.0%	1.7%	.8%	1.0%	.0%	100.0%
Column Percent	7.2%	3.9%	4.5%	3.7%	4.8%	.0%	7.0%
East North Central	1593	20	26	14	21	2	1676
Row Percent	95.0%	1.2%	1.6%	.8%	1.3%	.1%	100.0%
Column Percent	19.8%	13.0%	11.7%	10.4%	16.7%	22.2%	19.3%
East South Central	297	6	4	4	5	0	316
Row Percent	94.0%	1.9%	1.3%	1.3%	1.6%	.0%	100.0%
Column Percent	3.7%	3.9%	1.8%	3.0%	4.0%	.0%	3.6%
Middle Atlantic	1770	35	45	21	19	1	1891
Row Percent	93.6%	1.9%	2.4%	1.1%	1.0%	.1%	100.0%
Column Percent	22.1%	22.7%	20.2%	15.6%	15.1%	11.1%	21.8%
South Atlantic	1297	29	48	21	22	1	1418
Row Percent	91.5%	2.0%	3.4%	1.5%	1.6%	.1%	100.0%
Column Percent	16.2%	18.8%	21.5%	15.6%	17.5%	11.1%	16.3%
New England	610	8	23	12	7	1	661
Row Percent	92.3%	1.2%	3.5%	1.8%	1.1%	.2%	100.0%
Column Percent	7.6%	5.2%	10.3%	8.9%	5.6%	11.1%	7.6%
No Answer	55	6	2	27	26	2	118
Row Percent	46.6%	5.1%	1.7%	22.9%	22.0%	1.7%	100.0%
Column Percent	.7%	3.9%	.9%	20.0%	20.6%	22.2%	1.4%
Total	8026	154	223	135	126	9	8673
Row Percent	92.5%	1.8%	2.6%	1.6%	1.5%	.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 9.1.1

LENGTH OF UNEMPLOYMENT OF CHEMISTS UNEMPLOYED on MARCH 1, 1991
by HIGHEST DEGREE
1991 Survey of ACS Members

HIGHEST DEGREE	LENGTH OF UNEMPLOYMENT					Total
	Less than 1 mo	1-3 mos	4-6 mos	7-12 mos	More than 1 yr	
BS	7	15	5	7	7	41
Row Percent	17.1%	36.6%	12.2%	17.1%	17.1%	100.0%
Column Percent	25.9%	40.5%	33.3%	26.9%	23.3%	30.4%
MS	7	5	3	2	9	26
Row Percent	26.9%	19.2%	11.5%	7.7%	34.6%	100.0%
Column Percent	25.9%	13.5%	20.0%	7.7%	30.0%	19.3%
PhD	13	17	7	16	14	67
Row Percent	19.4%	25.4%	10.4%	23.9%	20.9%	100.0%
Column Percent	48.1%	45.9%	46.7%	61.5%	46.7%	49.6%
No Answer	0	0	0	1	0	1
Row Percent	.0%	.0%	.0%	100.0%	.0%	100.0%
Column Percent	.0%	.0%	.0%	3.8%	.0%	.7%
Total	27	37	15	26	30	135
Row Percent	20.0%	27.4%	11.1%	19.3%	22.2%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.1.1

ALL RESPONDENTS
by SEX and HIGHEST DEGREE
1991 Survey of ACS Members

SEX	HIGHEST DEGREE				Total
	BS	MS	PhD	No Answer	
Men	1709	1425	4832	65	8031
Row Percent	21.3%	17.7%	60.2%	.8%	100.0%
Column Percent	72.6%	75.9%	87.0%	84.4%	81.5%
Women	640	445	711	11	1807
Row Percent	35.4%	24.6%	39.3%	.6%	100.0%
Column Percent	27.2%	23.7%	12.8%	14.3%	18.3%
No Answer	5	7	8	1	21
Row Percent	23.8%	33.3%	38.1%	4.8%	100.0%
Column Percent	.2%	.4%	.1%	1.3%	.2%
Total	2354	1877	5551	77	9859
Row Percent	23.9%	19.0%	56.3%	.8%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.2.1

ALL RESPONDENTS
by AGE and HIGHEST DEGREE
1991 Survey of ACS Members

AGE	HIGHEST DEGREE				Total
	BS	MS	PHD	No Answer	
20-29	537	164	257	5	963
Row Percent	55.8%	17.0%	26.7%	.5%	100.0%
Column Percent	22.8%	8.7%	4.6%	6.5%	9.8%
30-39	796	599	1730	16	3141
Row Percent	25.3%	19.1%	55.1%	.5%	100.0%
Column Percent	33.8%	31.9%	31.2%	20.8%	31.9%
40-49	448	581	1684	21	2734
Row Percent	16.4%	21.3%	61.6%	.8%	100.0%
Column Percent	19.0%	31.0%	30.3%	27.3%	27.7%
50-59	343	325	1292	16	1976
Row Percent	17.4%	16.4%	65.4%	.8%	100.0%
Column Percent	14.6%	17.3%	23.3%	20.8%	20.0%
60-69	217	198	569	17	1001
Row Percent	21.7%	19.8%	56.8%	1.7%	100.0%
Column Percent	9.2%	10.5%	10.3%	22.1%	10.2%
70 or more	1	0	1	0	2
Row Percent	50.0%	.0%	50.0%	.0%	100.0%
Column Percent	.0%	.0%	.0%	.0%	.0%
No Answer	12	10	18	2	42
Row Percent	28.6%	23.8%	42.9%	4.8%	100.0%
Column Percent	.5%	.5%	.3%	2.6%	.4%
Total	2354	1877	5551	77	9859
Row Percent	23.9%	19.0%	56.3%	.8%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.2.2

MEN RESPONDENTS
by AGE and HIGHEST DEGREE
1991 Survey of ACS Members

AGE	HIGHEST DEGREE				Total
	BS	MS	PhD	No Answer	
20-29	298	89	184	5	576
Row Percent	51.7%	15.5%	31.9%	.9%	100.0%
Column Percent	17.4%	6.2%	3.8%	7.7%	7.2%
30-39	542	444	1412	10	2408
Row Percent	22.5%	18.4%	58.6%	.4%	100.0%
Column Percent	31.7%	31.2%	29.2%	15.4%	30.0%
40-49	359	440	1499	17	2315
Row Percent	15.5%	19.0%	64.8%	.7%	100.0%
Column Percent	21.0%	30.9%	31.0%	26.2%	28.8%
50-59	305	266	1200	15	1786
Row Percent	17.1%	14.9%	67.2%	.8%	100.0%
Column Percent	17.8%	18.7%	24.8%	23.1%	22.2%
60-69	200	185	529	17	931
Row Percent	21.5%	19.9%	56.8%	1.8%	100.0%
Column Percent	11.7%	13.0%	10.9%	26.2%	11.6%
70 or more	1	0	1	0	2
Row Percent	50.0%	.0%	50.0%	.0%	100.0%
Column Percent	.1%	.0%	.0%	.0%	.0%
No Answer	4	1	7	1	13
Row Percent	30.8%	7.7%	53.8%	7.7%	100.0%
Column Percent	.2%	.1%	.1%	1.5%	.2%
Total	1709	1425	4832	65	8031
Row Percent	21.3%	17.7%	60.2%	.8%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.2.3

WOMEN RESPONDENTS
by AGE and HIGHEST DEGREE
1991 Survey of ACS Members

AGE	HIGHEST DEGREE				Total
	BS	MS	PhD	No Answer	
20-29	239	75	73	0	387
Row Percent	61.8%	19.4%	18.9%	.0%	100.0%
Column Percent	37.3%	16.9%	10.3%	.0%	21.4%
30-39	254	155	318	6	733
Row Percent	34.7%	21.1%	43.4%	.8%	100.0%
Column Percent	39.7%	34.8%	44.7%	54.5%	40.6%
40-49	89	140	185	4	418
Row Percent	21.3%	33.5%	44.3%	1.0%	100.0%
Column Percent	13.9%	31.5%	26.0%	36.4%	23.1%
50-59	38	59	92	1	190
Row Percent	20.0%	31.1%	48.4%	.5%	100.0%
Column Percent	5.9%	13.3%	12.9%	9.1%	10.5%
60-69	17	13	40	0	70
Row Percent	24.3%	18.6%	57.1%	.0%	100.0%
Column Percent	2.7%	2.9%	5.6%	.0%	3.9%
No Answer	3	3	3	0	9
Row Percent	33.3%	33.3%	33.3%	.0%	100.0%
Column Percent	.5%	.7%	.4%	.0%	.5%
Total	640	445	711	11	1807
Row Percent	35.4%	24.6%	39.3%	.6%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.3.1

ALL RESPONDENTS
by WORK SPECIALTY and HIGHEST DEGREE
1991 Survey of ACS Members

SPECIALITY	HIGHEST DEGREE				Total
	BS	MS	PhD	No Answer	
Chemical engineering	149	147	245	6	547
Row Percent	27.2%	26.9%	44.8%	1.1%	100.0%
Column Percent	6.3%	7.8%	4.4%	7.8%	5.5%
Biochemistry	36	40	504	2	582
Row Percent	6.2%	6.9%	86.6%	.3%	100.0%
Column Percent	1.5%	2.1%	9.1%	2.6%	5.9%
Biotechnology	34	35	154	0	223
Row Percent	15.2%	15.7%	69.1%	.0%	100.0%
Column Percent	1.4%	1.9%	2.8%	.0%	2.3%
General chemistry	129	164	186	4	483
Row Percent	26.7%	34.0%	38.5%	.8%	100.0%
Column Percent	5.5%	8.7%	3.4%	5.2%	4.9%
Agricultural chemistry	57	40	152	8	257
Row Percent	22.2%	15.6%	59.1%	3.1%	100.0%
Column Percent	2.4%	2.1%	2.7%	10.4%	2.6%
Analytical chemistry	604	358	643	19	1624
Row Percent	37.2%	22.0%	39.6%	1.2%	100.0%
Column Percent	25.7%	19.1%	11.6%	24.7%	16.5%
Clinical chemistry	20	15	59	0	94
Row Percent	21.3%	16.0%	62.8%	.0%	100.0%
Column Percent	.8%	.8%	1.1%	.0%	1.0%
Environmental chemistry	304	199	238	1	742
Row Percent	41.0%	26.8%	32.1%	.1%	100.0%
Column Percent	12.9%	10.6%	4.3%	1.3%	7.5%
Inorganic chemistry	44	41	293	1	379
Row Percent	11.6%	10.8%	77.3%	.3%	100.0%
Column Percent	1.9%	2.2%	5.3%	1.3%	3.8%
Materials science	81	62	257	3	403
Row Percent	20.1%	15.4%	63.8%	.7%	100.0%
Column Percent	3.4%	3.3%	4.6%	3.9%	4.1%

Table 10.3.1 (continued)

SPECIALITY	HIGHEST DEGREE				Total
	BS	MS	PhD	No Answer	
Medicinal-Pharmaceutical	80	82	354	5	521
Row Percent	15.4%	15.7%	67.9%	1.0%	100.0%
Column Percent	3.4%	4.4%	6.4%	6.5%	5.3%
Organic chemistry	158	168	775	4	1105
Row Percent	14.3%	15.2%	70.1%	.4%	100.0%
Column Percent	6.7%	9.0%	14.0%	5.2%	11.2%
Physical chemistry	35	31	493	4	563
Row Percent	6.2%	5.5%	87.6%	.7%	100.0%
Column Percent	1.5%	1.7%	8.9%	5.2%	5.7%
Polymer chemistry	215	118	516	7	856
Row Percent	25.1%	13.8%	60.3%	.8%	100.0%
Column Percent	9.1%	6.3%	9.3%	9.1%	8.7%
Other chemical science	51	44	96	1	192
Row Percent	26.6%	22.9%	50.0%	.5%	100.0%
Column Percent	2.2%	2.3%	1.7%	1.3%	1.9%
Business Administration	63	92	78	0	233
Row Percent	27.0%	39.5%	33.5%	.0%	100.0%
Column Percent	2.7%	4.9%	1.4%	.0%	2.4%
Computer science	28	27	54	0	109
Row Percent	25.7%	24.8%	49.5%	.0%	100.0%
Column Percent	1.2%	1.4%	1.0%	.0%	1.1%
Law	13	7	37	1	58
Row Percent	22.4%	12.1%	63.8%	1.7%	100.0%
Column Percent	.6%	.4%	.7%	1.3%	.6%
Other nonchemistry	140	128	271	8	547
Row Percent	25.6%	23.4%	49.5%	1.5%	100.0%
Column Percent	5.9%	6.8%	4.9%	10.4%	5.5%
No Answer	113	79	146	3	341
Row Percent	33.1%	23.2%	42.8%	.9%	100.0%
Column Percent	4.8%	4.2%	2.6%	3.9%	3.5%
Total	2354	1877	5551	77	9859
Row Percent	23.9%	19.0%	56.3%	.8%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.4.1

ALL RESPONDENTS
by RACE/ETHNICITY and HIGHEST DEGREE
1991 Survey of ACS Members

RACE/ETHNICITY	HIGHEST DEGREE				Total
	BS	MS	PhD	No Answer	
American Indian	10	8	26	0	44
Row Percent	22.7%	18.2%	59.1%	.0%	100.0%
Column Percent	.4%	.4%	.5%	.0%	.4%
Asian	79	109	565	3	756
Row Percent	10.4%	14.4%	74.7%	.4%	100.0%
Column Percent	3.4%	5.8%	10.2%	3.9%	7.7%
Black	43	31	43	2	119
Row Percent	36.1%	26.1%	36.1%	1.7%	100.0%
Column Percent	1.8%	1.7%	.8%	2.6%	1.2%
White	2150	1673	4765	70	8658
Row Percent	24.8%	19.3%	55.0%	.8%	100.0%
Column Percent	91.3%	89.1%	85.8%	90.9%	87.8%
Hispanic	48	32	81	0	161
Row Percent	29.8%	19.9%	50.3%	.0%	100.0%
Column Percent	2.0%	1.7%	1.5%	.0%	1.6%
Other	12	11	31	0	54
Row Percent	22.2%	20.4%	57.4%	.0%	100.0%
Column Percent	.5%	.6%	.6%	.0%	.5%
No Answer	12	13	40	2	67
Row Percent	17.9%	19.4%	59.7%	3.0%	100.0%
Column Percent	.5%	.7%	.7%	2.6%	.7%
Total	2354	1877	5551	77	9859
Row Percent	23.9%	19.0%	56.3%	.8%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.5.1

ALL RESPONDENTS
by RACE/ETHNICITY and SEX
1991 Survey of ACS Members

RACE/ETHNICITY	SEX			Total
	Men	Women	No Answer	
American Indian	37	7	0	44
Row Percent	84.1%	15.9%	.0%	100.0%
Column Percent	.5%	.4%	.0%	.4%
Asian	614	142	0	756
Row Percent	81.2%	18.8%	.0%	100.0%
Column Percent	7.6%	7.9%	.0%	7.7%
Black	75	44	0	119
Row Percent	63.0%	37.0%	.0%	100.0%
Column Percent	.9%	2.4%	.0%	1.2%
White	7084	1573	1	8658
Row Percent	81.8%	18.2%	.0%	100.0%
Column Percent	88.2%	87.1%	4.8%	87.8%
Hispanic	131	30	0	161
Row Percent	81.4%	18.6%	.0%	100.0%
Column Percent	1.6%	1.7%	.0%	1.6%
Other	45	9	0	54
Row Percent	83.3%	16.7%	.0%	100.0%
Column Percent	.6%	.5%	.0%	.5%
No Answer	45	2	20	67
Row Percent	67.2%	3.0%	29.9%	100.0%
Column Percent	.6%	.1%	95.2%	.7%
Total	8031	1807	21	9859
Row Percent	81.5%	18.3%	.2%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%

Table 10.6.1

ALL RESPONDENTS
by RACE/ETHNICITY and CITIZENSHIP
1991 Survey of ACS Members

RACE/ETHNICITY	CITIZENSHIP					Total
	Native	Naturalized	Perm Res	Other visa	No Answer	
American Indian	43	0	1	0	0	44
Row Percent	97.7%	.0%	2.3%	.0%	.0%	100.0%
Column Percent	.5%	.0%	.2%	.0%	.0%	.4%
Asian	96	351	185	124	0	756
Row Percent	12.7%	46.4%	24.5%	16.4%	.0%	100.0%
Column Percent	1.2%	41.7%	40.4%	60.5%	.0%	7.7%
Black	97	10	9	3	0	119
Row Percent	81.5%	8.4%	7.6%	2.5%	.0%	100.0%
Column Percent	1.2%	1.2%	2.0%	1.5%	.0%	1.2%
White	7947	419	229	60	3	8658
Row Percent	91.8%	4.8%	2.6%	.7%	.0%	100.0%
Column Percent	95.4%	49.8%	50.0%	29.3%	13.6%	87.8%
Hispanic	88	38	23	12	0	161
Row Percent	54.7%	23.6%	14.3%	7.5%	.0%	100.0%
Column Percent	1.1%	4.5%	5.0%	5.9%	.0%	1.6%
Other	20	18	10	6	0	54
Row Percent	37.0%	33.3%	18.5%	11.1%	.0%	100.0%
Column Percent	.2%	2.1%	2.2%	2.9%	.0%	.5%
No Answer	42	5	1	0	19	67
Row Percent	62.7%	7.5%	1.5%	.0%	28.4%	100.0%
Column Percent	.5%	.6%	.2%	.0%	86.4%	.7%
Total	8333	841	458	205	22	9859
Row Percent	84.5%	8.5%	4.6%	2.1%	.2%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.7.1

ALL RESPONDENTS
by GEOGRAPHIC REGION and AGE
1991 Survey of ACS Members

GEOGRAPHIC REGION	AGE							Total
	20-29	30-39	40-49	50-59	60-69	70 or more	No Answer	
Pacific	115	411	324	223	105	0	3	1181
Row Percent	9.7%	34.8%	27.4%	18.9%	8.9%	.0%	.3%	100.0%
Column Percent	11.9%	13.1%	11.9%	11.3%	10.5%	.0%	7.1%	12.0%
Mountain	32	170	142	69	44	0	1	458
Row Percent	7.0%	37.1%	31.0%	15.1%	9.6%	.0%	.2%	100.0%
Column Percent	3.3%	5.4%	5.2%	3.5%	4.4%	.0%	2.4%	4.6%
West North Central	60	206	155	124	52	0	2	599
Row Percent	10.0%	34.4%	25.9%	20.7%	8.7%	.0%	.3%	100.0%
Column Percent	6.2%	6.6%	5.7%	6.3%	5.2%	.0%	4.8%	6.1%
West South Central	67	239	203	154	62	0	4	729
Row Percent	9.2%	32.8%	27.8%	21.1%	8.5%	.0%	.5%	100.0%
Column Percent	7.0%	7.6%	7.4%	7.8%	6.2%	.0%	9.5%	7.4%
East North Central	190	605	502	394	170	0	8	1869
Row Percent	10.2%	32.4%	26.9%	21.1%	9.1%	.0%	.4%	100.0%
Column Percent	19.7%	19.3%	18.4%	19.9%	17.0%	.0%	19.0%	19.0%
East South Central	24	106	117	73	38	1	1	360
Row Percent	6.7%	29.4%	32.5%	20.3%	10.6%	.3%	.3%	100.0%
Column Percent	2.5%	3.4%	4.3%	3.7%	3.8%	50.0%	2.4%	3.7%
Middle Atlantic	206	651	611	432	237	0	8	2145
Row Percent	9.6%	30.3%	28.5%	20.1%	11.0%	.0%	.4%	100.0%
Column Percent	21.4%	20.7%	22.3%	21.9%	23.7%	.0%	19.0%	21.8%

Table 10.7.1 (continued)

GEOGRAPHIC REGION	AGE							Total
	20-29	30-39	40-49	50-59	60-69	70 or more	No Answer	
South Atlantic	162	497	454	326	168	0	7	1614
Row Percent	10.0%	30.8%	28.1%	20.2%	10.4%	.0%	.4%	100.0%
Column Percent	16.8%	15.8%	16.6%	16.5%	16.8%	.0%	16.7%	16.4%
New England	91	217	203	149	88	1	2	751
Row Percent	12.1%	28.9%	27.0%	19.8%	11.7%	.1%	.3%	100.0%
Column Percent	9.4%	6.9%	7.4%	7.5%	8.8%	50.0%	4.8%	7.6%
No Answer	16	39	23	32	37	0	6	153
Row Percent	10.5%	25.5%	15.0%	20.9%	24.2%	.0%	3.9%	100.0%
Column Percent	1.7%	1.2%	.8%	1.6%	3.7%	.0%	14.3%	1.6%
Total	963	3141	2734	1976	1001	2	42	9859
Row Percent	9.8%	31.9%	27.7%	20.0%	10.2%	.0%	.4%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.8.1

ALL RESPONDENTS
by GEOGRAPHIC REGION and WORK FUNCTION
1991 Survey of ACS Members

WORK FUNCTION	GEOGRAPHIC REGION										Total
	Pacific	Mount	WN Central	WS Central	EN Central	ES Central	Middle Atl	S Atl	New England	No Answer	
R&D Mgt	116	35	52	66	208	31	270	174	82	14	1048
Row Percent	11.1%	3.3%	5.0%	6.3%	19.8%	3.0%	25.8%	16.6%	7.8%	1.3%	100.0%
Column Percent	9.8%	7.6%	8.7%	9.1%	11.1%	8.6%	12.6%	10.8%	10.9%	9.2%	10.6%
Basic research	101	29	44	37	150	21	259	170	55	8	874
Row Percent	11.6%	3.3%	5.0%	4.2%	17.2%	2.4%	29.6%	19.5%	6.3%	.9%	100.0%
Column Percent	8.6%	6.3%	7.3%	5.1%	8.0%	5.8%	12.1%	10.5%	7.3%	5.2%	8.9%
Applied research	239	80	129	170	482	67	559	318	162	28	2234
Row Percent	10.7%	3.6%	5.8%	7.6%	21.6%	3.0%	25.0%	14.2%	7.3%	1.3%	100.0%
Column Percent	20.2%	17.5%	21.5%	23.3%	25.8%	18.6%	26.1%	19.7%	21.6%	18.3%	22.7%
General Mgt	90	30	43	63	124	29	146	121	46	13	705
Row Percent	12.8%	4.3%	6.1%	8.9%	17.6%	4.1%	20.7%	17.2%	6.5%	1.8%	100.0%
Column Percent	7.6%	6.6%	7.2%	8.6%	6.6%	8.1%	6.8%	7.5%	6.1%	8.5%	7.2%
Marketing	45	11	23	35	75	16	93	61	38	9	406
Row Percent	11.1%	2.7%	5.7%	8.6%	18.5%	3.9%	22.9%	15.0%	9.4%	2.2%	100.0%
Column Percent	3.8%	2.4%	3.8%	4.8%	4.0%	4.4%	4.3%	3.8%	5.1%	5.9%	4.1%
Production	62	29	46	62	103	33	130	90	42	6	603
Row Percent	10.3%	4.8%	7.6%	10.3%	17.1%	5.5%	21.6%	14.9%	7.0%	1.0%	100.0%
Column Percent	5.2%	6.3%	7.7%	8.5%	5.5%	9.2%	6.1%	5.6%	5.6%	3.9%	6.1%
Health & Safety	42	19	16	17	61	10	60	87	18	3	333
Row Percent	12.6%	5.7%	4.8%	5.1%	18.3%	3.0%	18.0%	26.1%	5.4%	.9%	100.0%
Column Percent	3.6%	4.1%	2.7%	2.3%	3.3%	2.8%	2.8%	5.4%	2.4%	2.0%	3.4%
Forensics	9	4	1	4	21	2	8	15	2	0	66
Row Percent	13.6%	6.1%	1.5%	6.1%	31.8%	3.0%	12.1%	22.7%	3.0%	.0%	100.0%
Column Percent	.8%	.9%	.2%	.5%	1.1%	.6%	.4%	.9%	.3%	.0%	.7%

Table 10.8.1 (continued)

WORK FUNCTION	GEOGRAPHIC REGION										Total
	Pacific	Mount	WN Central	WS Central	EN Central	ES Central	Middle Atl	S Atl	New England	No Answer	
Other lab analysis	54	20	20	24	92	10	65	41	29	3	358
Row Percent	15.1%	5.6%	5.6%	6.7%	25.7%	2.8%	18.2%	11.5%	8.1%	.8%	100.0%
Column Percent	4.6%	4.4%	3.3%	3.3%	4.9%	2.8%	3.0%	2.5%	3.9%	2.0%	3.6%
Teaching	3	5	2	3	8	2	11	7	4	1	46
Row Percent	6.5%	10.9%	4.3%	6.5%	17.4%	4.3%	23.9%	15.2%	8.7%	2.2%	100.0%
Column Percent	.3%	1.1%	.3%	.4%	.4%	.6%	.5%	.4%	.5%	.7%	.5%
Chem info services	8	3	2	4	37	0	23	9	4	1	91
Row Percent	8.8%	3.3%	2.2%	4.4%	40.7%	.0%	25.3%	9.9%	4.4%	1.1%	100.0%
Column Percent	.7%	.7%	.3%	.5%	2.0%	.0%	1.1%	.6%	.5%	.7%	.9%
Computers	9	3	2	4	5	1	14	13	3	1	55
Row Percent	16.4%	5.5%	3.6%	7.3%	9.1%	1.8%	25.5%	23.6%	5.5%	1.8%	100.0%
Column Percent	.8%	.7%	.3%	.5%	.3%	.3%	.7%	.8%	.4%	.7%	.6%
Patents	5	0	5	6	11	0	19	23	2	0	71
Row Percent	7.0%	.0%	7.0%	8.5%	15.5%	.0%	26.8%	32.4%	2.8%	.0%	100.0%
Column Percent	.4%	.0%	.8%	.8%	.6%	.0%	.9%	1.4%	.3%	.0%	.7%
Consulting	56	14	13	16	38	12	53	49	37	5	293
Row Percent	19.1%	4.8%	4.4%	5.5%	13.0%	4.1%	18.1%	16.7%	12.6%	1.7%	100.0%
Column Percent	4.7%	3.1%	2.2%	2.2%	2.0%	3.3%	2.5%	3.0%	4.9%	3.3%	3.0%
Other	29	19	7	18	48	11	45	58	21	10	266
Row Percent	10.9%	7.1%	2.6%	6.8%	18.0%	4.1%	16.9%	21.8%	7.9%	3.8%	100.0%
Column Percent	2.5%	4.1%	1.2%	2.5%	2.6%	3.1%	2.1%	3.6%	2.8%	6.5%	2.7%
No Answer	313	157	194	200	406	115	390	378	206	51	2410
Row Percent	13.0%	6.5%	8.0%	8.3%	16.8%	4.8%	16.2%	15.7%	8.5%	2.1%	100.0%
Column Percent	26.5%	34.3%	32.4%	27.4%	21.7%	31.9%	18.2%	23.4%	27.4%	33.3%	24.4%
Total	1181	458	599	729	1869	360	2145	1614	751	153	9859
Row Percent	12.0%	4.6%	6.1%	7.4%	19.0%	3.7%	21.8%	16.4%	7.6%	1.6%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.9.1

ALL RESPONDENTS
by GEOGRAPHIC REGION and WORK SPECIALTY
1991 Survey of ACS Members

WORK SPECIALTY	GEOGRAPHIC REGION										Total
	Pacific	Mount	WN Central	WS Central	EN Central	ES Central	Middle Atl	S Atl	New England	No Answer	
Chemical eng	59	31	32	70	89	26	130	67	37	6	547
Row Percent	10.8%	5.7%	5.9%	12.8%	16.3%	4.8%	23.8%	12.2%	6.8%	1.1%	100.0%
Column Percent	5.0%	6.8%	5.3%	9.6%	4.8%	7.2%	6.1%	4.2%	4.9%	3.9%	5.5%
Biochemistry	83	22	32	38	87	27	116	115	56	6	582
Row Percent	14.3%	3.8%	5.5%	6.5%	14.9%	4.6%	19.9%	19.8%	9.6%	1.0%	100.0%
Column Percent	7.0%	4.8%	5.3%	5.2%	4.7%	7.5%	5.4%	7.1%	7.5%	3.9%	5.9%
Biotechnology	48	14	11	7	29	6	45	34	28	1	223
Row Percent	21.5%	6.3%	4.9%	3.1%	13.0%	2.7%	20.2%	15.2%	12.6%	.4%	100.0%
Column Percent	4.1%	3.1%	1.8%	1.0%	1.6%	1.7%	2.1%	2.1%	3.7%	.7%	2.3%
General chemistry	52	24	36	51	102	20	76	79	36	7	483
Row Percent	10.8%	5.0%	7.5%	10.6%	21.1%	4.1%	15.7%	16.4%	7.5%	1.4%	100.0%
Column Percent	4.4%	5.2%	6.0%	7.0%	5.5%	5.6%	3.5%	4.9%	4.8%	4.6%	4.9%
Agricultural chem	39	9	20	8	46	4	48	66	9	8	257
Row Percent	15.2%	3.5%	7.8%	3.1%	17.9%	1.6%	18.7%	25.7%	3.5%	3.1%	100.0%
Column Percent	3.3%	2.0%	3.3%	1.1%	2.5%	1.1%	2.2%	4.1%	1.2%	5.2%	2.6%
Analytical chem	178	90	91	141	324	62	344	263	117	14	1624
Row Percent	11.0%	5.5%	5.6%	8.7%	20.0%	3.8%	21.2%	16.2%	7.2%	.9%	100.0%
Column Percent	15.1%	19.7%	15.2%	19.3%	17.3%	17.2%	16.0%	16.3%	15.6%	9.2%	16.5%
Clinical chemistry	21	1	11	0	22	3	13	17	5	1	94
Row Percent	22.3%	1.1%	11.7%	.0%	23.4%	3.2%	13.8%	18.1%	5.3%	1.1%	100.0%
Column Percent	1.8%	.2%	1.8%	.0%	1.2%	.8%	.6%	1.1%	.7%	.7%	1.0%
Environmental chem	132	57	45	54	137	36	108	115	53	5	742
Row Percent	17.8%	7.7%	6.1%	7.3%	18.5%	4.9%	14.6%	15.5%	7.1%	.7%	100.0%
Column Percent	11.2%	12.4%	7.5%	7.4%	7.3%	10.0%	5.0%	7.1%	7.1%	3.3%	7.5%
Inorganic chem	36	21	30	30	78	18	88	60	16	2	379
Row Percent	9.5%	5.5%	7.9%	7.9%	20.6%	4.7%	23.2%	15.8%	4.2%	.5%	100.0%
Column Percent	3.0%	4.6%	5.0%	4.1%	4.2%	5.0%	4.1%	3.7%	2.1%	1.3%	3.8%
Materials science	40	16	30	23	70	11	103	71	35	4	403
Row Percent	9.9%	4.0%	7.4%	5.7%	17.4%	2.7%	25.6%	17.6%	8.7%	1.0%	100.0%
Column Percent	3.4%	3.5%	5.0%	3.2%	3.7%	3.1%	4.8%	4.4%	4.7%	2.6%	4.1%

Table 10.9.1 (continued)

WORK SPECIALTY	GEOGRAPHIC REGION										Total
	Pacific	Mount	WN Central	WS Central	EN Central	ES Central	Middle Atl	S Atl	New England	No Answer	
Medicinal/Pharm	39	12	32	18	84	12	178	88	46	12	521
Row Percent	7.5%	2.3%	6.1%	3.5%	16.1%	2.3%	34.2%	16.9%	8.8%	2.3%	100.0%
Column Percent	3.3%	2.6%	5.3%	2.5%	4.5%	3.3%	8.3%	5.5%	6.1%	7.8%	5.3%
Organic chemistry	109	36	68	90	234	44	279	145	80	20	1105
Row Percent	9.9%	3.3%	6.2%	8.1%	21.2%	4.0%	25.2%	13.1%	7.2%	1.8%	100.0%
Column Percent	9.2%	7.9%	11.4%	12.3%	12.5%	12.2%	13.0%	9.0%	10.7%	13.1%	11.2%
Physical chemistry	92	38	35	35	85	11	127	91	46	3	563
Row Percent	16.3%	6.7%	6.2%	6.2%	15.1%	2.0%	22.6%	16.2%	8.2%	.5%	100.0%
Column Percent	7.8%	8.3%	5.8%	4.8%	4.5%	3.1%	5.9%	5.6%	6.1%	2.0%	5.7%
Polymer chemistry	66	18	50	53	220	33	201	122	77	16	856
Row Percent	7.7%	2.1%	5.8%	6.2%	25.7%	3.9%	23.5%	14.3%	9.0%	1.9%	100.0%
Column Percent	5.6%	3.9%	8.3%	7.3%	11.8%	9.2%	9.4%	7.6%	10.3%	10.5%	8.7%
Other chem science	25	13	11	15	33	8	39	32	13	3	192
Row Percent	13.0%	6.8%	5.7%	7.8%	17.2%	4.2%	20.3%	16.7%	6.8%	1.6%	100.0%
Column Percent	2.1%	2.8%	1.8%	2.1%	1.8%	2.2%	1.8%	2.0%	1.7%	2.0%	1.9%
Bus Admin	25	6	11	16	50	8	56	36	19	6	233
Row Percent	10.7%	2.6%	4.7%	6.9%	21.5%	3.4%	24.0%	15.5%	8.2%	2.6%	100.0%
Column Percent	2.1%	1.3%	1.8%	2.2%	2.7%	2.2%	2.6%	2.2%	2.5%	3.9%	2.4%
Computer science	19	4	5	6	16	4	24	24	6	1	109
Row Percent	17.4%	3.7%	4.6%	5.5%	14.7%	3.7%	22.0%	22.0%	5.5%	.9%	100.0%
Column Percent	1.6%	.9%	.8%	.8%	.9%	1.1%	1.1%	1.5%	.8%	.7%	1.1%
Law	5	1	3	4	10	0	14	19	2	0	58
Row Percent	8.6%	1.7%	5.2%	6.9%	17.2%	.0%	24.1%	32.8%	3.4%	.0%	100.0%
Column Percent	.4%	.2%	.5%	.5%	.5%	.0%	.7%	1.2%	.3%	.0%	.6%
Other nonchemistry	68	31	27	41	95	16	101	108	49	11	547
Row Percent	12.4%	5.7%	4.9%	7.5%	17.4%	2.9%	18.5%	19.7%	9.0%	2.0%	100.0%
Column Percent	5.8%	6.8%	4.5%	5.6%	5.1%	4.4%	4.7%	6.7%	6.5%	7.2%	5.5%
No Answer	45	14	19	29	58	11	55	62	21	27	341
Row Percent	13.2%	4.1%	5.6%	8.5%	17.0%	3.2%	16.1%	18.2%	6.2%	7.9%	100.0%
Column Percent	3.8%	3.1%	3.2%	4.0%	3.1%	3.1%	2.6%	3.8%	2.8%	17.6%	3.5%
Total	1181	458	599	729	1869	360	2145	1614	751	153	9859
Row Percent	12.0%	4.6%	6.1%	7.4%	19.0%	3.7%	21.8%	16.4%	7.6%	1.6%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 10.10.1

ALL RESPONDENTS
by GEOGRAPHIC REGION and SEX
1991 Survey of ACS Members

GEOGRAPHIC REGION	SEX			Total
	Men	Women	No Answer	
Pacific	949	231	1	1181
Row Percent	80.4%	19.6%	.1%	100.0%
Column Percent	11.8%	12.8%	4.8%	12.0%
Mountain	370	87	1	458
Row Percent	80.8%	19.0%	.2%	100.0%
Column Percent	4.6%	4.8%	4.8%	4.6%
West North Central	492	107	0	599
Row Percent	82.1%	17.9%	.0%	100.0%
Column Percent	6.1%	5.9%	.0%	6.1%
West South Central	620	108	1	729
Row Percent	85.0%	14.8%	.1%	100.0%
Column Percent	7.7%	6.0%	4.8%	7.4%
East North Central	1519	345	5	1869
Row Percent	81.3%	18.5%	.3%	100.0%
Column Percent	18.9%	19.1%	23.8%	19.0%
East South Central	298	62	0	360
Row Percent	82.8%	17.2%	.0%	100.0%
Column Percent	3.7%	3.4%	.0%	3.7%
Middle Atlantic	1753	389	3	2145
Row Percent	81.7%	18.1%	.1%	100.0%
Column Percent	21.8%	21.5%	14.3%	21.8%
South Atlantic	1306	304	4	1614
Row Percent	80.9%	18.8%	.2%	100.0%
Column Percent	16.3%	16.8%	19.0%	16.4%
New England	610	140	1	751
Row Percent	81.2%	18.6%	.1%	100.0%
Column Percent	7.6%	7.7%	4.8%	7.6%
No Answer	114	34	5	153
Row Percent	74.5%	22.2%	3.3%	100.0%
Column Percent	1.4%	1.9%	23.8%	1.6%
Total	8031	1807	21	9859
Row Percent	81.5%	18.3%	.2%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%

Table 10.11.1

ALL RESPONDENTS
by GEOGRAPHIC REGION and HIGHEST DEGREE
1991 Survey of ACS Members

GEOGRAPHIC REGION	HIGHEST DEGREE				Total
	BS	MS	PhD	No Answer	
Pacific	292	204	680	5	1181
Row Percent	24.7%	17.3%	57.6%	.4%	100.0%
Column Percent	12.4%	10.9%	12.3%	6.5%	12.0%
Mountain	109	76	269	4	458
Row Percent	23.8%	16.6%	58.7%	.9%	100.0%
Column Percent	4.6%	4.0%	4.8%	5.2%	4.6%
West North Central	147	102	345	5	599
Row Percent	24.5%	17.0%	57.6%	.8%	100.0%
Column Percent	6.2%	5.4%	6.2%	6.5%	6.1%
West South Central	162	134	427	6	729
Row Percent	22.2%	18.4%	58.6%	.8%	100.0%
Column Percent	6.9%	7.1%	7.7%	7.8%	7.4%
East North Central	521	376	962	10	1869
Row Percent	27.9%	20.1%	51.5%	.5%	100.0%
Column Percent	22.1%	20.0%	17.3%	13.0%	19.0%
East South Central	96	57	205	2	360
Row Percent	26.7%	15.8%	56.9%	.6%	100.0%
Column Percent	4.1%	3.0%	3.7%	2.6%	3.7%
Middle Atlantic	464	446	1210	25	2145
Row Percent	21.6%	20.8%	56.4%	1.2%	100.0%
Column Percent	19.7%	23.8%	21.8%	32.5%	21.8%
South Atlantic	352	295	956	11	1614
Row Percent	21.8%	18.3%	59.2%	.7%	100.0%
Column Percent	15.0%	15.7%	17.2%	14.3%	16.4%
New England	163	154	429	5	751
Row Percent	21.7%	20.5%	57.1%	.7%	100.0%
Column Percent	6.9%	8.2%	7.7%	6.5%	7.6%
No Answer	48	33	68	4	153
Row Percent	31.4%	21.6%	44.4%	2.6%	100.0%
Column Percent	2.0%	1.8%	1.2%	5.2%	1.6%
Total	2354	1877	5551	77	9859
Row Percent	23.9%	19.0%	56.3%	.8%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

American Chemical Society

1155 SIXTEENTH STREET, N.W.
WASHINGTON, D.C. 20036
Phone (202) 872-4600

JOHN KISTLER CRUM
Executive Director

February 22, 1991

Dear Colleague:

Each year the American Chemical Society studies the economic status of the U.S. chemical profession by surveying a sample of ACS members. You are one of 17,000 members I am asking to participate in this survey, conducted under the aegis of the Joint Board-Council Committee on Economic Status.

Your participation is an important service to your colleagues, because a high response rate is needed to assure accurate results. Please take a few minutes now to complete the questionnaire and return it in the enclosed business reply envelope. The procedure is strictly confidential. Your name and address will not be coded with the information you provide. It is included only so that we can cross your name off our follow-up list once we have received your completed questionnaire. The information you provide will be combined with returns from other members so that only aggregated data will be available.

Findings will be reported to ACS members in several ways. Early in the summer, Chemical & Engineering News will publish a cover story on the salaries and employment status of chemists. At about the same time, the ACS will publish a detailed report entitled "Salaries 1991."

Please feel free to use the back of the questionnaire for whatever comments or suggestions you might care to make.

Thank you for your assistance.

Sincerely,

John Kistler Crum

John Kistler Crum

JKC/jsb

Enclosure

AMERICAN CHEMICAL SOCIETY
1991 Comprehensive Salary and Employment Status Survey

PART I. EDUCATION AND EMPLOYMENT STATUS

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

- Less than Bachelor's ☐ 1
- Bachelor's ☐ 2
- Master's ☐ 3
- Doctorate ☐ 4
- Other (specify) ☐ 5

1

2. Please indicate the year in which you earned any of the following degrees:

Bachelor's	19__ __	2-3
Master's	19__ __	4-5
Doctorate	19__ __	6-7

3. Please check the appropriate box in <u>each</u> column.

	Field of highest degree	The ONE specialty most related to your current or most recent job
Chemical engineering	☐ 01	☐ 01
Biochemistry	☐ 02	☐ 02
Biotechnology	☐ 03	☐ 03
General chemistry	☐ 04	☐ 04
Agricultural/food chemistry	☐ 05	☐ 05
Analytical chemistry	☐ 06	☐ 06
Clinical chemistry	☐ 07	☐ 07
Environmental chemistry	☐ 08	☐ 08
Inorganic chemistry	☐ 09	☐ 09
Materials science	☐ 10	☐ 10
Medicinal/pharmaceutical chemistry	☐ 11	☐ 11
Organic chemistry	☐ 12	☐ 12
Physical chemistry	☐ 13	☐ 13
Polymer chemistry	☐ 14	☐ 14
Other chemical science	☐ 15	☐ 15
Business Administration	☐ 16	☐ 16
Computer Science	☐ 17	☐ 17
Law	☐ 18	☐ 18
Other Non-chemistry	☐ 19	☐ 19

8-11

4. Please enter your primary employment status as of March 1, 1991. Choose the one category that best fits your situation.

- Employed full-time (35 hours or more per week) ☐ 1
- Employed part-time ☐ 2
- Postdoctoral or other fellowship ☐ 3
- Not employed but actively seeking employment ☐ 4
- Not employed and NOT seeking employment ☐ 5

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5. If you were NOT EMPLOYED BUT ACTIVELY SEEKING EMPLOYMENT on March 1, 1991, how long had you been unemployed?

- Less than 1 month ☐ 1
- 1 to 3 months ☐ 2
- 4 to 6 months ☐ 3
- 7 to 12 months ☐ 4
- More than 1 year ☐ 5

13

6. Regardless of your current status, was there any period when you were NOT EMPLOYED AND ACTIVELY SEEKING EMPLOYMENT in calendar year 1990?

Yes ☐ 1 No ☐ 2

14

IF YES, how many total weeks were you NOT EMPLOYED AND ACTIVELY SEEKING EMPLOYMENT during calendar year 1990?

_____ **weeks (ENTER A NUMBER FROM 1 TO 52)** 15-16

7. Do you consider yourself underemployed in your position? (<u>mark all</u> that apply)

- No, I am not underemployed ☐ 1
- Yes, the job is not in my field ☐ 2
- Yes, the job is not commensurate with my level of training ☐ 3
- Yes, the job is not commensurate with my level of experience ☐ 4
- Yes, I would prefer a more challenging position ☐ 5
- Yes, and I am currently looking for a more commensurate position ☐ 6
- Yes, but I prefer to remain in this position for personal reasons ☐ 7

17

8. If you are CURRENTLY EMPLOYED, how long have you worked for your current employer?

__ __ years __ __ months 18-21

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

__ __ __ 22-24

Continued ➔

PART II. QUESTIONS ABOUT YOURSELF

1. **Your sex:**

   Male ☐ 1 Female ☐ 2 25

2. **Your age at last birthday before March 1, 1991:**

   ___ ___ years old 26-27

3. **Citizenship or visa status:**

   U.S. native ☐ 1
   U.S. naturalized ☐ 2
   U.S. permanent resident visa ☐ 3
   Other visa ☐ 4 28

4. **What is your racial background?**

   American Indian or Alaskan Native ☐ 1
   Asian ☐ 2
   Black/African-American ☐ 3
   White ☐ 4
   Other ☐ 5 29

5. **Are you of Spanish/Hispanic origin or descent?**

   Yes ☐ 1 No ☐ 2 30

IF YOU ARE EMPLOYED, EITHER FULL TIME OR PART TIME, PLEASE ANSWER PART III., CURRENT INCOME.

IF YOU ARE NOT CURRENTLY EMPLOYED, PLEASE SKIP TO PART IV, CURRENT OR MOST RECENT JOB.

PART III. CURRENT INCOME

1. **BASE ANNUAL SALARY from PRINCIPAL JOB as of March 1, 1991. (DO NOT INCLUDE bonuses, earnings from second job, 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.**

   $ _____ per year 31-37

2. **TOTAL PROFESSIONAL INCOME during calendar year 1990. (INCLUDE consulting fees, base annual salary, bonuses, earnings from second job, overtime, summer teaching, and other supplemental earnings.)**

   $ _____ per year 38-44

PART IV. CURRENT OR MOST RECENT PRIMARY JOB.

IF YOUR CURRENT OR MOST RECENT EMPLOYER IS NOT AN ACADEMIC INSTITUTION, GO TO SECTION B ON THE NEXT PAGE.

A. CURRENT OR MOST RECENT EMPLOYMENT IS IN AN ACADEMIC INSTITUTION.

1. **Current (or most recent) principal employer:**

   College or university where the highest degree offered in chemistry or chemical engineering is:
   - Associate ☐ 1
   - Bachelor's ☐ 2
   - Master's ☐ 3
   - Doctorate ☐ 4

   Medical or professional school ☐ 5
   High school ☐ 6 45

2. **Your employer is a:**

   Public institution ☐ 1
   Private institution ☐ 2 46

3. **Your academic rank:**

   Full professor ☐ 1
   Associate professor ☐ 2
   Assistant professor ☐ 3
   Visiting or adjunct professor, instructor, lecturer ☐ 4
   Non-teaching research appointment ☐ 5
   Other nonfaculty ☐ 6
   My institution does not have ranks ☐ 7 47

4. **Have you been granted tenure?**

   Yes ☐ 1
   Not tenured, in tenure track ☐ 2
   Not tenured, not in tenure track ☐ 3
   Not applicable ☐ 4 48

5. **Your basic contract is for a period of:**

   9 or 10 months ☐ 1
   11 or 12 months ☐ 2 49

6. **About what fraction of your total working time in the academic year is devoted to:**

Teaching	_____ %	50-52
Research	_____ %	53-55
Administration	_____ %	56-58
Other	_____ %	59-61
TOTAL	100.0	

THANK YOU. YOU HAVE COMPLETED THE QUESTIONNAIRE. PLEASE USE THE BLANK SPACE ON THE BACK OF THIS FORM FOR COMMENTS.

Continued →

B. CURRENT OR MOST RECENT EMPLOYMENT IS *NOT* IN AN ACADEMIC INSTITUTION.

1. Current (or most recent) principal employer:

- Self-employed ☐ 01
- Non-manufacturing:
  - Analytical service laboratory ☐ 02
  - Contract research firms ☐ 03
  - Legal firm ☐ 04
  - Utility company ☐ 05
  - Other Non-manufacturing (specify) _____ ☐ 06
- Manufacturing company primarily involved in:
  - Aerospace ☐ 07
  - Basic chemicals ☐ 08
  - Specialty chemicals ☐ 09
  - Agricultural chemicals ☐ 10
  - Biochemical products ☐ 11
  - Coating, paints, inks ☐ 12
  - Electronics ☐ 13
  - Food ☐ 14
  - Glass, ceramics ☐ 15
  - Instruments ☐ 16
  - Medical devices/Diagnostic Products ☐ 17
  - Metals, minerals ☐ 18
  - Paper ☐ 19
  - Petroleum/natural gas ☐ 20
  - Pharmaceuticals, personal care ☐ 21
  - Plastics ☐ 22
  - Rubber ☐ 23
  - Soaps, detergents, surfactants ☐ 24
  - Other manufactures (specify) _____ ☐ 25
- Government
  - Federal (civilian) ☐ 26
  - State or local ☐ 27
  - Military ☐ 28
- Other non-academic employer:
  - Hospital, independent laboratory ☐ 29
  - Non-profit organization, other research institution ☐ 30
- Other employment ☐ 31 62-63

2. Check the ONE work function that best describes your job.

- Research and Development
  - Management or administration of R&D ☐ 01
  - Basic research ☐ 02
  - Applied research, development, design ☐ 03
- General management, administration (other than research and development) ☐ 04
- Marketing, sales, purchasing, technical service, economic evaluation ☐ 05
- Production, quality control ☐ 06
- Health and safety/regulatory affairs ☐ 07
- Forensic analysis ☐ 08
- Other laboratory analysis ☐ 09
- Teaching ☐ 10
- Chemistry information services ☐ 11
- Computer programming, analysis, design ☐ 12
- Patents, licensing, trademarks ☐ 13
- Consulting ☐ 14
- Other ☐ 15 64-65

3 Is your job classified as a :

- Technician ☐ 1
- Postdoctoral position ☐ 2
- Scientist or Engineer ☐ 3
- Other ☐ 4 66

4. Were you eligible for a bonus during calendar 1990?

Yes ☐ 1 No ☐ 2 Not applicable ☐ 3 67

5. Did you receive a bonus during calendar 1990?

Yes ☐ 1 No ☐ 2 Not applicable ☐ 3 68

If YES, please indicate amount $ _____ 69-74

6. How many people do you supervise, directly or indirectly? Please enter the actual number if it is between 0 and 99; 99 if the number is 100 or more.

- Professionals ☐☐ 75-76
- Technicians ☐☐ 77-78
- Others, including production workers ☐☐ 79-80

7. LEVEL OF RESPONSIBILITY: Please examine the statements within each of the four groups (Duties, Technical Decisions and Recommendations, Supervision Received, and Supervision Exercised) and, within each group, check the box of the statement that most closely corresponds to your responsibility on the job. (Check only one in each group.)

a. Duties:

- I receive on-the-job training working on simple projects or assisting more senior staff ☐ 1
- I perform responsible and varied assignments within projects ☐ 2
- I plan, conduct, and coordinate projects of some complexity ☐ 3
- I undertake long-term and short-term planning and supervision of projects. I make decisions on work programs and have budgetary control of projects. ☐ 4
- I have full managerial responsibility for a function with full responsibility for the operation of a budget and long term planning ☐ 5 81

b. Technical Decisions and Recommendations:

- I am responsible for minor technical details only, all other matters being checked ☐ 1
- I am responsible for technical detail which is reviewed overall ☐ 2
- I am responsible for technical matters but am subject to occasional review ☐ 3
- I have full technical responsibility for projects ☐ 4
- I am responsible for all technical matters including the delegation of responsibility ☐ 5 82

Continued→

c. Supervision Received:

My work is assigned with detailed instructions, guidance being always available. My results are subject to close scrutiny..... ☐ 1

My work is assigned in terms of detailed objectives and priorities, guidance being available on problems and unusual features. My work is subject to scrutiny..... ☐ 2

My work is assigned in terms of general objectives and priorities, guidance being available on policy or unusually complex problems. My work is reviewed for effectiveness only..... ☐ 3

My work is such that I receive executive instruction on broad overall objectives and it is reviewed only for its general effectiveness and adherence to policy..... ☐ 4

My work is unsupervised, other than I comply with the policy decided within the governing body..... ☐ 5

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d. Supervision Exercised:

I have no authority but may give technical guidance to juniors working on the same project..... ☐ 1

I have no managerial responsibilities for qualified staff but may be assigned graduates, technicians, or other juniors as assistants from time to time..... ☐ 2

I supervise a group of qualified staff, technicians, and other employees. I assign and review their work. I can recommend on the selection, discipline, rating, training, and perhaps rate of pay..... ☐ 3

I am responsible for leaders of groups containing qualified staff, technicians, and other employees. I give guidance on policy and complex technical matters delegating responsibility for discipline, rating, training, and rates of pay..... ☐ 4

I have full control over senior staff who are in turn responsible for groups of qualified staff and other employees..... ☐ 5

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Comments:

THANK YOU FOR YOUR PARTICIPATION.
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