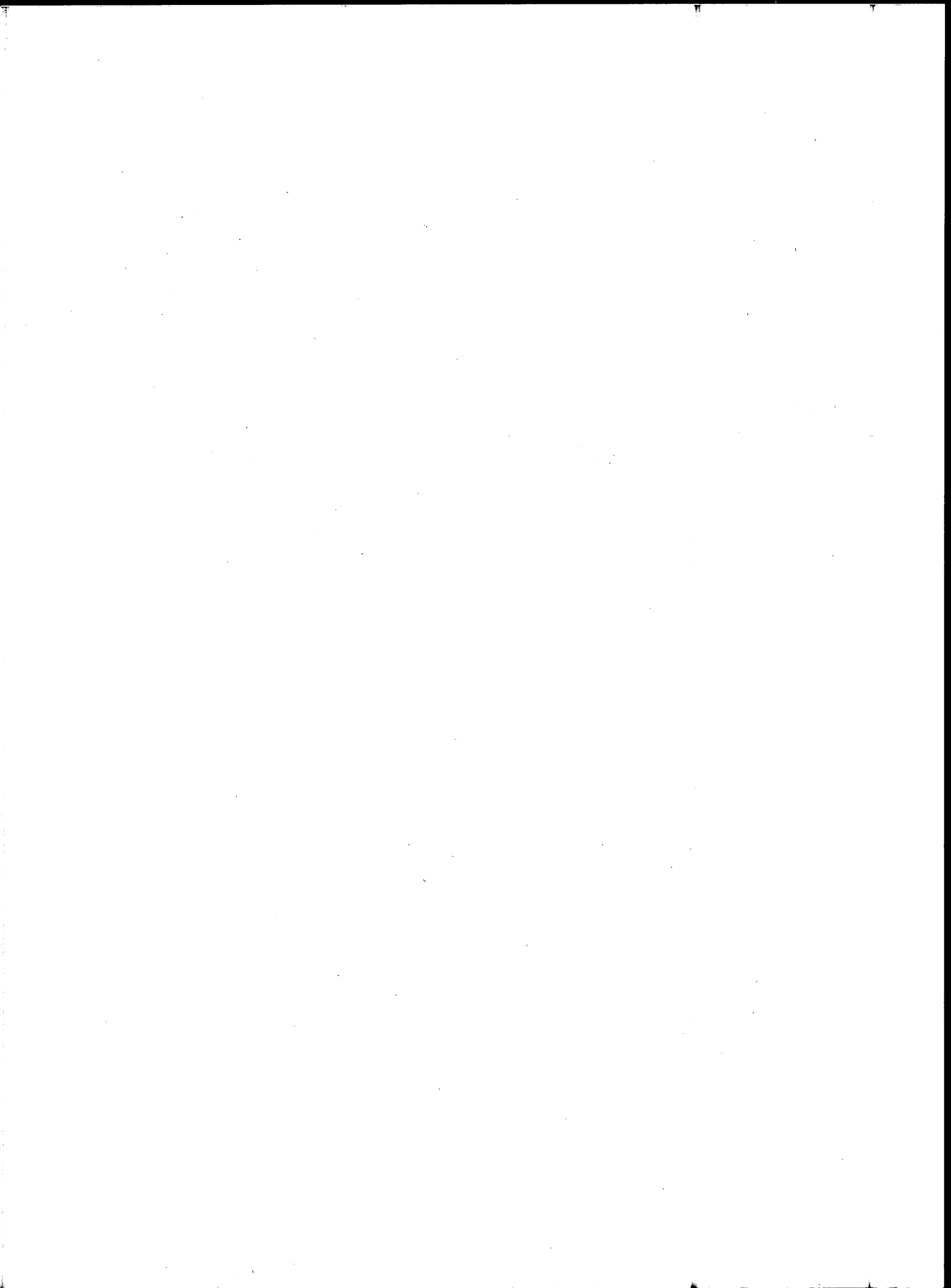


STARTING \$ALARIES\$

**Of Chemists and
Chemical Engineers**

Analysis of the
American Chemical Society's
Survey of Graduates in
Chemistry and Chemical Engineering

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STARTING SALARIES OF CHEMISTS

1995

Analysis of the
American Chemical Society's
Survey of Graduates in
Chemistry and Chemical Engineering

American Chemical Society
1155 Sixteenth Street, NW
Washington, DC 20036

Available from the ACS Membership Service Center

CONTENTS

	Page
Acknowledgments.....	iv
Summary of Findings.....	1
Salaries	
Post-graduation Employment Status	
Employment of Bachelor's Chemists as Technicians	
Number of Offers	
Postdoctoral Fellowships	
Plans for Advanced Study	
Graduates Who Have Completed ACS Approved Programs	
Race/Ethnic Composition of New Graduates	
Citizenship Status of New Graduates	
Scope and Method.....	13
Objectives	
Method of Collection and Timing of Survey	
Extent of Coverage	
Definitions	
Geographic Regions	
Technical Notes.....	15
Discrepancies Among Tables	
Estimates of Median Salaries	
Comparing Salaries	
Estimating Sampling Error for Percents	
List of Tables.....	17
Tables.....	21
Survey Questionnaire and Cover Letter.....	87

ACKNOWLEDGMENTS

Each year, at the direction of its Council Committee on Economic and Professional Affairs, the American Chemical Society (ACS) surveys recent chemistry and chemical engineering graduates to determine trends in starting salaries and employment status. This report presents detailed results of the 1995 Starting Salary Survey. A summary of the survey findings was published in the October 23 issue of *Chemical & Engineering News*.

Corinne Marasco, Manager of Professional Services in the Department of Career Services, conducted this year's survey. Mary Jordan analyzed the data and wrote the summary and comment on the following pages. Special thanks go to the more than 4800 graduates who took the time to respond to this year's survey.

Mary L. Funke, Head
Department of Career Services

SUMMARY OF FINDINGS

SALARIES

This year's new BS chemistry graduates saw small increases in starting salaries, after stagnating since 1992. The mean salary for inexperienced BS chemists was \$25,409 this year, an increase of 3.2 percent over 1994. The median starting salary was \$25,000 this year. Even after adjusting for inflation, BS chemists' mean salaries increased by .6 percent.

The news on starting salaries for MS and PhD chemists was mixed. The mean starting salary for MS chemists rose by 7.5 percent this year to \$34,760, the largest increase for chemists. At the same time the mean starting salary for PhD chemists fell below even the 1993 level with a 1.9 percent decline this year to \$45,087. Inflation-adjusted salaries for MS chemists were up 4.9 percent and for PhD chemists down 4.5 percent.

Chemical engineers continued overall to earn higher salaries than those of chemists, but BS chemical engineers showed substantial declines in the period between 1993* and 1995. The mean starting salary for inexperienced BS chemical engineers was \$37,571 in 1995, down 2.8 percent from 1993. The loss of salary in current dollars was compounded by an inflation adjustment of 5.6 percent during that period. The mean starting salary for inexperienced MS chemical engineers was \$43,315, up just over 4 percent from 1993, and the mean starting salary for PhD chemical engineers was \$56,724, up 9.2 percent since 1993.

Table 1 shows average starting salaries paid to inexperienced chemistry and chemical engineering graduates for 1994 and 1995, and gives additional information concerning the variation among salaries within each group. Table 2 presents corresponding information for chemical engineers.

For inexperienced chemists (those with less than 12 months of experience), 1995 mean starting salaries changed in the following ways from 1994:

\$25,409 for the BS,	up	3.4%,	or in constant dollars	up	.6%
\$34,760 for the MS,	up	7.5%,	or in constant dollars	up	4.9%
\$45,087 for the PhD,	down	1.9%,	or in constant dollars	down	4.5%

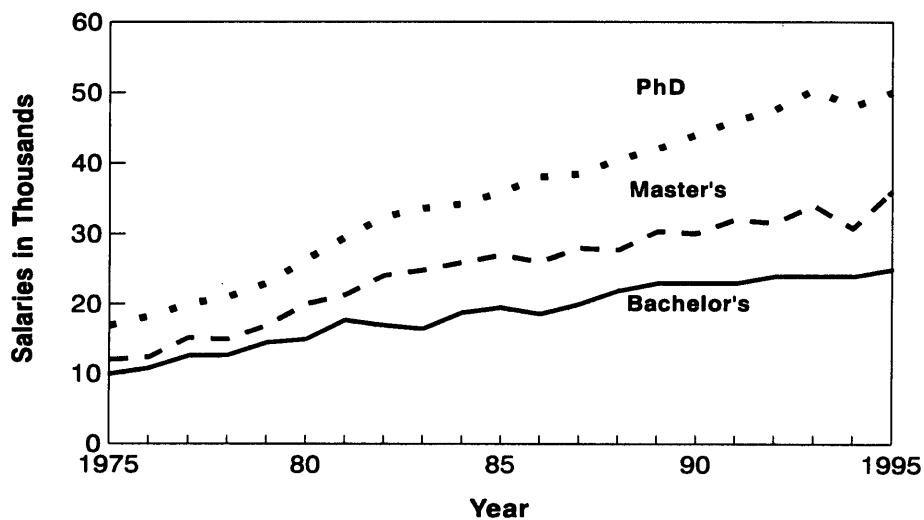
Among inexperienced chemical engineers, the 1995 mean starting salaries changed in the following ways from 1993:

\$37,571 for the BS,	down	2.8%,	or in constant dollars	down	8.4%
\$43,315 for the MS,	up	4.1%,	or in constant dollars	down	1.5%
\$56,724 for the PhD,	up	9.2%,	or in constant dollars	up	3.6%

The Consumer Price Index rose 2.6 percent from August 1994 to August 1995 and 5.6 percent from August 1993 to August 1995. The trends in median starting salaries from 1983 to the present for inexperienced chemists and chemical engineers are shown in Figures 1 and 2.

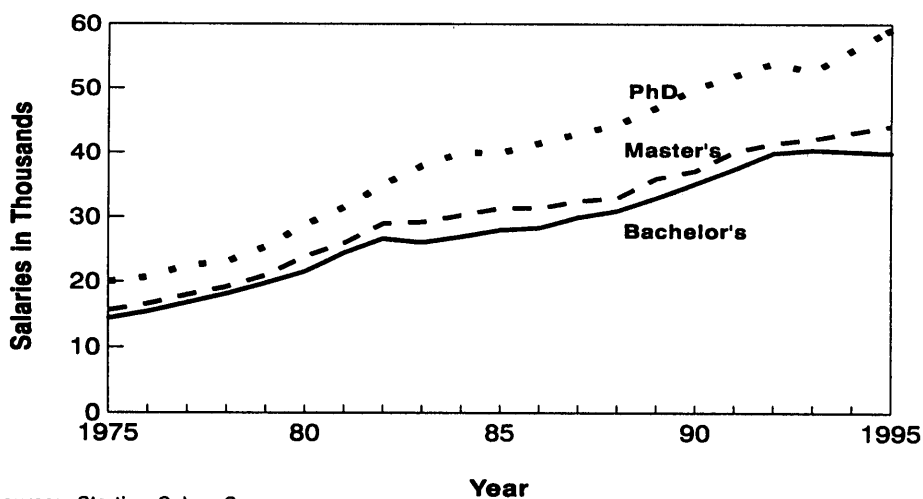
* In 1994, chemical engineering graduates were unintentionally dropped from those who were surveyed. Thus, comparisons for this report are for 1995 and 1993.

Figure 1
Median Starting Salaries of Inexperienced Chemists
 (in current dollars)



Source: Starting Salary Surveys

Figure 2
Median Starting Salaries of Inexperienced Chemical Engineers
 (in current dollars)



Source: Starting Salary Surveys

Note: 1994 figures extrapolated

Table 1

**Median Starting Salaries, 1975-1995
(by Degree and in 1000s and Current Dollars)**

Year	Chemists			Chemical Engineers		
	BS	MS	PHD	BS	MS	PHD
1975	10.0	12.0	17.0	14.4	15.6	20.0
76	10.8	12.4	18.3	15.4	16.6	20.7
77	12.6	15.2	20.0	16.8	18.0	22.5
78	12.7	15.0	21.0	18.2	19.2	23.1
79	14.5	17.0	23.0	19.8	21.0	25.4
1980	15.0	20.0	26.4	21.6	23.9	28.8
81	17.7	21.3	29.5	24.5	26.0	31.5
82	17.0	24.1	32.4	26.7	29.0	35.0
83	16.5	24.9	33.6	26.1	29.3	38.0
84	18.8	26.0	34.2	27.0	30.3	40.0
1985	19.5	27.0	35.9	28.0	31.4	40.0
86	18.6	26.1	38.0	28.4	31.0	41.5
87	20.0	28.0	38.4	30.0	32.5	43.0
88	21.9	27.7	40.5	31.0	33.0	44.4
89	23.0	30.3	42.0	33.0	36.0	47.0
1990	23.0	30.0	44.0	35.2	37.2	50.0
91	23.0	32.0	46.0	37.5	40.2	52.0
92	24.0	31.5	47.5	40.0	41.5	54.0
93	24.0	34.0	50.4	40.5	42.2	52.7
94	24.0	30.8	48.0	na	na	na
1995	25.0	36.0	50.0	40.0	44.2	59.2

Overall starting salaries for new graduates are a summary measure. Thus, any trends must be seen in the light of generalization of figures where other factors may affect the median salaries for the population. Some of these factors are regional differences in pay structures, the type of employer, and the type of industry that hires a large proportion of new graduates.

The salary trends for the past twenty years in chemistry, as shown in Figure 1, and chemical engineering, as shown in Figure 2, began with similar patterns and wages in 1975 and have followed more divergent paths since then. Those chemists with bachelor's degrees show the least increase in starting salaries in that period. From 1989, the new BS chemists show very little increase in starting pay. Chemical engineers with bachelor's degrees showed much larger increases throughout the period until 1992, when they also showed no increases and a small decrease in starting pay for 1995.

Chemists and chemical engineers with doctorates displayed similar patterns of increasing starting salaries, showing greater proportional increases than other degrees. Chemical engineers started higher in 1975 and increased at greater rates than chemists. These groups both show declines in median starting salaries in the 1990s. In 1995, median starting salaries for those with doctorates showed increases for both chemists and chemical engineers.

As noted in Table 1, until the 1990s, median starting salaries for chemical engineers with master's degrees showed little variation from chemical engineers holding a bachelor's. Chemists with master's degrees increased more rapidly than the rate of increase for the bachelor's throughout the period.

**STARTING YEARLY SALARIES
OF INEXPERIENCED FULL-TIME EMPLOYED**

Table 2

**CHEMISTRY GRADUATES
by Degree: 1994 and 1995**

Salaries	DEGREE LEVEL					
	Bachelor's		Master's		Doctorate	
	1994	1995	1994	1995	1994	1995
90th Percentile	\$32,500	34,000	42,900	45,000	60,000	58,800
75th Percentile	28,740	29,000	38,000	40,000	56,000	55,000
50th Percentile	24,000	25,000	30,750	36,000	48,000	50,000
25th Percentile	20,000	21,000	25,000	28,000	35,600	35,000
10th Percentile	17,200	19,200	23,000	25,000	27,000	28,000
Mean	24,603	25,409	32,348	34,760	45,965	45,087
Count	243	348	42	47	78	73
Standard Deviation	6,354	5,805	8,243	7,736	12,778	12,662

Table 3

**CHEMICAL ENGINEERING GRADUATES
by Degree: 1993* and 1995**

Salaries	DEGREE LEVEL					
	Bachelor's		Master's		Doctorate	
	1993	1995	1993	1995	1993	1995
90th Percentile	\$42,700	43,500	48,000	47,500	60,000	65,000
75th Percentile	41,500	42,000	45,000	46,000	58,000	62,000
50th Percentile	40,500	40,000	42,200	44,200	52,700	59,230
25th Percentile	37,500	35,000	40,200	41,000	50,000	52,500
10th Percentile	30,000	27,000	34,000	36,000	46,000	45,500
Mean	38,463	37,571	41,617	43,315	51,943	45,965
Count	210	342	14	22	18	20
Standard Deviation	5,687	6,397	7,107	5,744	9,208	7,246

* Data not available for 1994.

As previously stated, salaries vary by the type and characteristics of the employer as well as the educational background of the graduates. Salaries are highest in private industry and lowest in colleges or universities. The median salary for new chemistry PhDs was \$54,000 for those employed in industry and \$32,000 for those employed in colleges or universities (see Table A-6). The majority of chemical engineers are employed in private industry.

Larger employers generally pay more than smaller ones. Bachelor's chemists employed in larger firms (25,000 or more employees) make about \$7,000 more than those employed in small firms (less than 500 employees) (see Table A-8). New bachelor's chemists are more likely to be employed in small firms than large firms. Only 20 percent of new bachelor's chemists are employed in firms with 25,000 or more employees while 41 percent are employed in firms with less than 500 employees. The proportion of chemistry graduates who found employment in smaller firms decreased this year (last year 47 percent of new bachelor's chemists found employment in firms with less than 500 employees).

Chemical engineers are newly employed in firms of all sizes. As with chemists the pay differs according to the size of the company. New BS chemical engineers' salaries differ by about \$8,000 between the larger firms (25,000 or more employees) and smaller firms (500 or less employees)

Salaries for new BS chemistry graduates are highest in the Middle Atlantic region (\$27,750) and lowest in the East South Central (\$22,325). Much of the gain in BS starting salaries in 1995 appears to be related to increases in regions, especially on the lower salary scales. The highest region, the Middle Atlantic region, also employs the largest proportion of inexperienced BS chemists. Salaries for new BS chemical engineers are highest in the West South Central region and, as with BS chemists, lowest in the East South Central region. (See page 13 for a list of the states included in each geographic region.)

Generally speaking, bachelor's chemists receive higher starting salaries if they have participated in an ACS-approved program. For example, the median starting salary of inexperienced bachelor's chemists who do not participate in a ACS-approved program is \$22,940; for those who do, it is \$25,000. Graduates of ACS-approved programs receive higher starting salaries if they participate in co-op programs. The median starting salary of a bachelor's chemist with a 'C' average in his or her major is \$23,700; with a 'B' or better average, it is \$25,000. Thus, grades make some difference in median starting salaries of chemists with bachelor's degrees, but the correlation between grades and starting salaries is much stronger amongst those with a bachelor's in chemical engineering.

For bachelor chemical engineers, salaries correlate closely with the grades they receive. The higher a BS chemical engineer's grade point, both in the major and overall, the higher is the starting salary. For example, a chemical engineer with a 'C' average in his or her major earns about \$31,000 starting salary and with an 'A' average, it is over \$41,000.

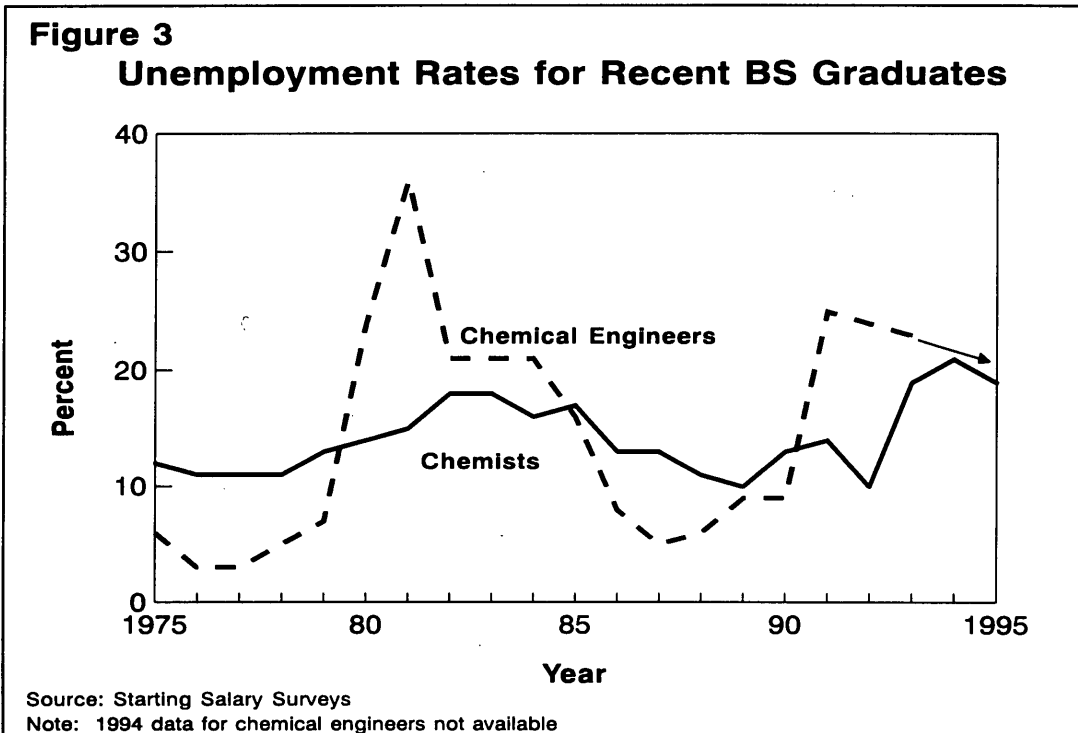
Bachelor's and master's graduates in chemistry and who are on graduate assistantships or fellowships typically receive about \$14,000. Stipends for postdoctoral fellowships average about \$24,000 for chemistry postdocs. Chemical engineering graduates generally receive \$15,000 at the bachelor's and master's level and \$27,000 at the postdoc level.

POST-GRADUATION EMPLOYMENT STATUS

Unemployment rates for bachelor's chemistry graduates decreased this year to the 1993 level. The recent history for unemployment rates of bachelor's chemistry and chemical engineering graduates is[†]:

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Chemistry	13%	13%	11%	10%	13%	14%	10%	19%	21%	19%
Chemical Engineering	21%	16%	8%	5%	6%	9%	9%	25%	na%	23%

As Figure 3 shows, unemployment for chemistry and chemical engineering graduates this year continues to be relatively high, but declining. Chemistry graduates appear to find the chemistry job market more attractive this year as a lower proportion are opting to stay out of the job market for a few more years by going to graduate school. The proportion of new bachelor's chemistry graduates in the labor force[‡] who found employment in chemistry or chemical engineering rebounds to 53 percent this year, up from last year's 50 percent.



[†]Note that the calculation for the unemployment rate excludes those persons who are not seeking employment. In Table B-1a, 503 bachelor's chemists indicated they are not seeking employment. They are subtracted from the total before calculating the unemployment rate ($2271 - 503 = 1767$). Since the number of bachelor's chemists seeking employment is 330, the unemployment rate is calculated as $(330 \div 1767) \times 100 = 19\%$.

[‡]Here the "labor force" is defined as those persons who are either employed full-time or are seeking work. New graduates who are not seeking employment or who are on fellowships are excluded from this calculation. In Table B-1a, 503 bachelor's chemists indicated they are not seeking employment and 630 bachelor's chemists indicated they are on fellowships. Subtracted from a total of 2271, the labor force as defined is 1137 people. Since 598 bachelor's chemists reported they are working full-time in chemistry, the calculation is as follows: $(598 \div 1137) \times 100 = 53\%$.

Table 4

**POST-GRADUATION STATUS OF CHEMISTRY AND
CHEMICAL ENGINEERING GRADUATES: FALL 1995**

Major and Employment Status	Bachelor's	Master's	Doctorate
CHEMISTRY			
Full-time employed:			
In chemistry or chemical engineering	26.3%	43.5%	39.8%
Outside chemistry or chemical engineering	9.2%	7.6%	1.5%
Grad. asst./postdoctoral or other fellowship	27.7%	26.2%	35.9%
Unemployed and seeking full-time employment	14.5%	14.6%	20.8%
Unemployed and not seeking full-time employment	22.1%	8.0%	2.1%
Total	100.0	100.0	100.0
Number of responses	2271	301	337
CHEMICAL ENGINEERING			
Full-time employed:			
In chemistry or chemical engineering	49.6%	40.1%	63.9%
Outside chemistry or chemical engineering	13.3%	11.7%	6.0%
Grad. asst./postdoctoral or other fellowship	9.6%	25.5%	18.1%
Unemployed and seeking full-time employment	21.2%	15.3%	12.0%
Unemployed and not seeking full-time employment	6.4%	7.3%	---%
Total	100.0	100.0	100.0
Number of responses	1130	137	83

EMPLOYMENT OF BACHELOR'S CHEMISTS AS TECHNICIANS

About one-third of the bachelor's chemistry graduates who were employed full-time in industry responded that they were employed as technicians. Those employed as technicians earned significantly lower salaries than those not employed as technicians. The median salary of bachelor's chemistry graduates employed in industry as technicians was \$25,000 whereas the median salary of those not employed as technicians was almost \$28,000. For the chemical engineering graduate with a bachelor's degree, the difference was also significant, with a median salary for a technician at \$36,900 and \$41,000 for those not employed as technicians.

NUMBER OF OFFERS

This year the number of firm offers of employment rose over last year's overall, but the proportion who received only one offer rose also. In 1995, for chemistry graduates who are employed, over half of chemistry graduates had at least one firm offer. Over 53 percent of chemical engineering graduates had only one offer of employment this year. This year also, about four percent had five or more offers of employment, doubling last year's percentage (see Table E-1).

New master's and PhD chemistry graduates had about the same number of offers of employment, on average, as bachelor's graduates. Experience made a slight difference in average number of offers of employment. Both inexperienced and experienced BS chemistry graduates had, on average, two offers of employment. New PhD chemists whose field was biochemistry or polymer chemistry had more offers this year, on average, than those in other fields.

POSTDOCTORAL FELLOWSHIPS

The fraction of new PhDs who accept postdoctoral fellowships can sometimes be used as a rough indicator of demand. Because some of the new doctoral graduates who accept postdoctoral fellowships would have preferred full-time employment had it been available, an increase in the fraction accepting postdoctoral fellowships can indicate insufficient full-time employment. This year, the fraction accepting postdoctoral fellowships fell below the previous four years while the unemployment rate increased slightly. Less than 36 percent of new chemistry doctorates accepted postdoctoral fellowships this year (Table 4). Rather than indicating an increase in demand, this may also indicate that new doctorates are still having a hard time obtaining postdoctoral fellowships as well as in obtaining full-time employment.

PLANS FOR ADVANCED STUDY

Traditionally, between 50 percent and 55 percent of bachelor's chemistry graduates plan full-time studies in the coming year (in any field) and another roughly 10% plan part-time studies. In 1995, the percent of bachelor's chemistry graduates declined to 48 percent who planned to study full-time in the fall of 1995. In 1994 nearly 52 percent planned full-time studies this year, down from 54 percent in 1993. Most bachelor's in chemical engineering opt for employment. Hence, only 17 percent of them are planning to study full-time in the fall of 1995. A summary of the plans of the 1995 graduates appears in Tables 5 and 6

Table 5

**PLANS FOR FURTHER STUDY OF BACHELOR'S
CHEMISTRY GRADUATES: FALL 1995**

Plans	Chemistry	Chemical Engineering
Further studies	56.3%	23.0%
Full-time	(48.4%)	(17.3%)
Part-time	(7.9%)	(5.7%)
No plans for further studies	43.7%	76.9%
Total	100.0	100.0
Number of responses	2,491	1,183

Table 6

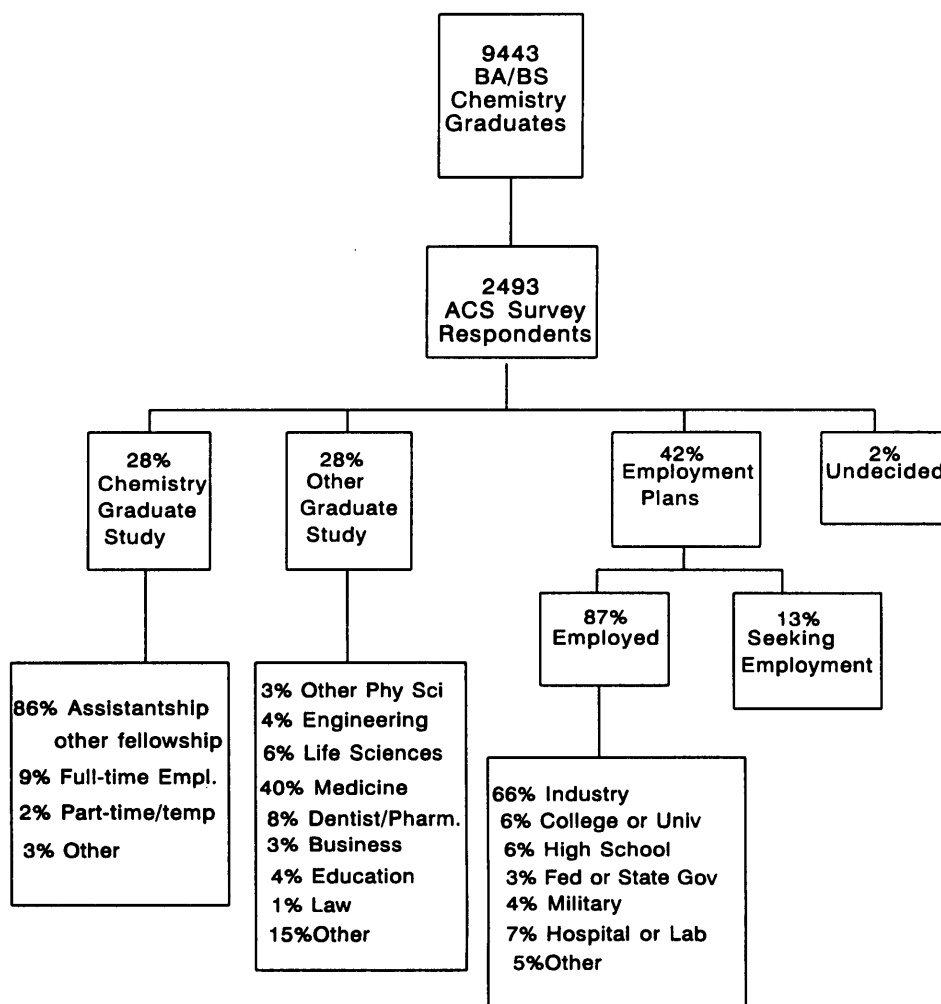
**FIELDS OF STUDY OF BACHELOR'S CHEMISTRY AND
CHEMICAL ENGINEERING GRADUATES WHO PLAN FURTHER STUDIES
FALL 1995**

Plans	Chemistry	Chemical Engineering
FULL-TIME STUDY		
Chemistry or biochemistry	52.0%	0.0%
Chemical or biochemical engineering	1.1%	59.3%
Other engineering	0.8%	12.7%
Medicine, dentistry, or pharmacy	32.0%	12.3%
Business or management	0.7%	4.9%
All others	13.4%	10.8%
Total	100.0	100.0
Number of responses	1194	204
PART-TIME STUDY		
Chemistry or biochemistry	41.4%	1.5%
Chemical or biochemical engineering	3.9%	35.4%
Other engineering	1.7%	12.3%
Physical science	5.5%	0.0%
Life science	7.7%	1.5%
Medicine, dentistry, or pharmacy	10.6%	3.1%
Business or management	11.0%	36.9%
Education	6.1%	0.0%
All others	12.1%	9.3%
Total	100.0	100.0
Number of responses	181	65

Each year, roughly one-third of new bachelor's chemistry graduates plan to pursue chemistry graduate study, one-third plan graduate study in another field, and one-third have plans for immediate employment (see Figure 4). Those planning for advanced study in the fall of 1995 fell far below the one-third figures of previous years. Only 28 percent of the 1995 bachelor's chemistry graduates planned to pursue graduate studies in either chemistry or any other field. The proportion of bachelor's in chemistry who pursued employment over advanced study increased about 10 percent over previous years. Of those bachelor's chemistry graduates who planned further studies in another discipline in 1995, 40 percent planned to go into medicine, 8 percent planned to go into dentistry or pharmacy, 3 percent planned to study business, 13 percent planned to study other natural sciences and engineering, and 15 percent planned to go into other fields. The choice of field of study has not changed appreciably in the last decade.

Of those bachelor's chemistry graduates who chose immediate employment, the majority chose industrial employment. Of those who are employed, 66 percent are employed in industry, and less than 10 percent each are employed in colleges and universities, in high schools, in government, and in hospitals or independent labs.

Figure 4
Post-graduation Plans of 1995 Bachelor's Chemistry Graduates



CHEMISTRY GRADUATES WHO HAVE COMPLETED ACS-APPROVED PROGRAMS

Graduates completing undergraduate chemistry programs approved by the ACS Committee on Professional Training have historically received higher starting salaries than graduates completing non-approved programs. This year, graduates who completed the ACS-approved program earned, on average, about \$27,000 per year in industry, compared to about \$24,000 for those who did not complete the approved program (Table A-10).

Graduates of approved programs are more likely than graduates of non-approved programs to plan further studies and to plan further studies in chemistry. Fifty-four percent of graduates of approved programs planned full-time studies compared with 33 percent of graduates of non-approved programs (Table B-4b). Of the bachelor's chemistry graduates who plan full-time studies, 68 percent of those from approved programs plan to study chemistry, compared with only one-third of those from non-approved programs. Conversely, 35 percent of those from non-approved programs plan to study medicine compared with only about 8 percent of those from approved programs (Table C-4).

Graduates of approved programs are also less likely than those from non-approved programs to be unemployed and among those employed, are more likely to be employed in chemistry or chemical engineering. The unemployment rate for bachelor's graduates of approved programs was 14 percent this year, compared to 21 percent for graduates of non-approved programs. Among the full-time employed bachelor's chemistry graduates, 80 percent of graduates of ACS approved programs, but only 64 percent of graduates of non-approved programs were employed in chemistry or chemical engineering. (Table B-4a).[§]

RACE/ETHNIC COMPOSITION OF NEW GRADUATES

Minorities, and particularly Asians, are an increasing fraction of new graduates in chemistry and chemical engineering. The proportion of new bachelor's chemistry graduates who are African-American or Hispanic has increased fairly slowly since 1973, when ACS first collected such information. In 1973, African-Americans were 2.3 percent and Hispanics were .7 percent of bachelor's chemistry graduates. This year, African-Americans are 3.8 percent and Hispanics are 3.8 percent of bachelor's chemistry graduates. Native Americans are a very small proportion (1 percent or less) of new graduates in chemistry at all degree levels.

The proportion of new chemistry graduates who are Asian has more than trebled since 1973. In that year, Asians were 3 percent of bachelor's, 9 percent of master's, and 9 percent of PhD graduates. This year, Asians are 10 percent of bachelor's, 29 percent of master's, and 30 percent of PhD graduates. Eighty percent of bachelor's chemistry graduates of Asian descent are U.S. citizens (either native or naturalized). Only 8 percent are here on temporary visas. The reverse is true for PhDs. Only 7 percent of doctoral chemistry graduates of Asian descent are U.S. citizens and 46 percent are here on temporary visas.

[§]Note that the calculation for the unemployment rate excludes those persons who are not seeking employment. In Table B-4a, the number of full-time employed bachelor's chemistry graduates from ACS-approved programs is 379 (304+75) and the number of full-time employed bachelor's chemistry graduates from non-approved programs is 220 (141+79). Therefore, the proportions of graduates employed in chemistry or chemical engineering are $(304 \div 379) \times 100 = 80\%$ and $(141 \div 220) \times 100 = 64\%$.

CITIZENSHIP STATUS OF NEW GRADUATES

In chemistry and chemical engineering, the proportion of graduates who are U.S. citizens has decreased and the proportion of graduates with temporary visas has increased over the last decade, especially among master's and doctoral graduates. Among bachelor's chemistry graduates, 95.5 percent of the graduates are U.S. citizens. (see Table F-2). Among chemical engineering bachelor's recipients, the proportion who are U.S. citizens dropped slightly below 90% (Table F-5). Among master's chemistry graduates, the proportion of graduates who have temporary visas increased from 5 percent of the chemistry graduates in 1983 to 19 percent of the chemistry graduates in 1994 and 23 percent in 1995. Similarly, among graduates with doctoral degrees, the proportion of graduates who have temporary visas has increased from 8 percent of the chemistry graduates in 1983 to 17 percent in 1995.

New bachelor's graduates with temporary visas are much more likely than those with U.S. citizenship to have plans for further studies. More than 69 percent of the bachelor's graduates on temporary visas, but only 48 percent of those with U.S. citizenship plan full-time studies in the fall of 1995. Among new PhDs, those with temporary visas are more likely to have postdoctoral appointments and are more likely to be unemployed than those with U.S. citizenship. Over 55 percent of new PhDs with temporary visas have postdoctoral fellows opposed to less than a third of those with U. S. citizenship. Less than two percent of those with U.S. citizenship are not employed and seeking employment (see Tables B-2a and B-2b)

For new chemical engineering graduates, the proportion who are U.S. citizens is 90 percent for those with bachelor's degrees. The proportion of bachelor's recipients on temporary visas is 2 percent. For chemical engineers with master's and the doctorate, the proportion with temporary visas is 32 percent and 23 percent respectively. The dynamics of citizenship are similar between the two fields, with the proportions of graduates with temporary visas increasing significantly with graduate degrees.

SCOPE AND METHOD

OBJECTIVES

The 1995 Starting Salary Survey is the 45th in the series of annual surveys conducted by the American Chemical Society. Summaries of the results of these surveys appear annually in the "Employment Outlook" issue of *Chemical & Engineering News*. This year, preliminary results were published on October 23.

The primary objective of the survey is to gather data on the starting salaries and occupational status of new chemists and chemical engineers who graduated during the 1994-95 academic year. The survey covers bachelor's, master's, and doctoral degree recipients. In addition, the survey provides information on graduates' sex, citizenship, and ethnicity.

METHOD OF COLLECTION AND TIMING OF SURVEY

Chemistry departments approved by ACS and chemical engineering departments approved by the American Institute of Chemical Engineers and the Engineer's Council for Professional Development provided names and addresses of students who graduated between September, 1994 and June, 1995. During the summer of 1995, questionnaires were mailed to those graduates whose names had been provided and who had U.S. addresses.

EXTENT OF COVERAGE

Survey questionnaires were mailed by first class mail from July through August to 9,571 graduates. Approximately 4 weeks after each initial mailing, a second questionnaire and cover letter were sent to non-respondents. By the cutoff date of November 3, ACS had received 4,823 usable responses.

DEFINITIONS

The term "inexperienced" as used in the tables refers to those who have 12 months or less of prior professional work experience. The term "chemist" refers to one who received a degree in chemistry. Salary tables are based only on salaries of those who found full-time employment in chemistry or chemical engineering. Postdoctoral salaries are analyzed separately. Salaries are reported in U.S. dollars.

The Technical Notes present methods for estimating sampling error and also explain certain discrepancies among some of the tables.

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

TECHNICAL NOTES

DISCREPANCIES AMONG TABLES

Because not all individuals responded to all of the survey items, some pairs of tables contain totals that should be identical but are not. For example, one table may group PhDs by sex and another by employer. The totals will differ unless the number who did not indicate their sex is the same as the number who did not indicate their employer.

ESTIMATES OF MEDIAN SALARIES

Median salaries displayed within the cells of the salary tables are sample medians and are therefore subject to sampling error. This error could be quite large, especially when the number of respondents in the corresponding cell is small. Therefore, median salaries in cells with fewer than 15 respondents should not be used to estimate their corresponding population medians. Similarly, tables showing the 25th and 75th salary percentiles, and those showing the 10th and 90th salary percentiles, should have at least 25 respondents and 40 respondents, respectively.

COMPARING SALARIES

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

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

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

ESTIMATING SAMPLING ERROR FOR PERCENTS

Percents in this report are derived from the sample. If the entire population had received and returned questionnaires, most estimates would be somewhat different. How much different? Although this question does not have an exact answer, the table below does provide some guidance. To use the table, find the column headed by the percent (p) derived from the sample, and find the row appropriate for the sample size (n). (Approximations for p and n may be used.) Note the number in that column and that row of the table.

This number from the body of the table measures the precision with which the sample percent estimates the percent of the entire population. Specifically, if this procedure is applied repeatedly, about 95 times out of 100, the population percent will differ from the sample percent by no more than the amount shown in the table.

Approximate Sampling Errors for Percents

n	p=10% or 90%	p=20% or 80%	p=30% or 70%	p=40% or 60%	p=50%
50	8.3%	11.1%	12.7%	13.6%	13.9%
100	5.9	7.8	9.0	9.6	9.8
200	4.2	5.5	6.4	6.8	6.9
500	2.6	3.5	4.0	4.3	4.4
1000	1.9	2.5	2.8	3.0	3.1
2000	1.3	1.8	2.0	2.1	2.2
5000	0.8	1.1	1.3	1.4	1.4
10000	0.6	0.8	0.9	1.0	1.0

In Table B-1a for example, 1054 respondents classified as chemists indicated their highest degree as the bachelor's degree and their gender as female. The percent of this group who are employed full-time in chemistry is 28.0 percent ($p=28.0$). A "95 percent confidence interval" for this percent may be approximated by taking n and p to be about 1000 and 20 percent. The above table shows an approximate sampling error of 2.5 percent. Hence, the 95 percent confidence interval is 25.6 percent to 30.5 percent. If estimates were made at this "level of confidence" from 100 similar samples, about 95 of the confidence intervals calculated from these samples would contain the true population percent.

LIST OF TABLES

	Table Number	Page
SALARIES OF RESPONDENTS		
Full-time Chemists		
Degree..... Experience.....	A-1	21
Full-time Chemical Engineers		
Degree..... Experience.....	A-2	22
Full-time Inexperienced Chemists in Private Industry		
Degree..... Sex	A-3	23
Full-time Inexperienced Chemical Engineers in Private Industry		
Degree..... Sex	A-4	24
Full-time Inexperienced Chemists		
Degree..... Sex	A-5	25
Employer	A-6	26
Industry.....	A-7	27
Employer Size	A-8	28
Work Function	A-9	29
ACS-Approved Curriculum BS.....	A-10	30
Degree Specialty MS and PhD	A-11	31
Geographic Region.....	A-12	32
Full-time Inexperienced Chemical Engineers		
Degree..... Sex	A-13	33
Employer	A-14	34
Industry.....	A-15	35
Employer Size	A-16	36
Work Function	A-17	37
Geographic Region.....	A-18	38
Stipends of New Graduates on Graduate Assistantships, Fellowships, or Postdoctoral Fellowships		
Field Degree.....	A19	39

	Table Number	Page
EMPLOYMENT STATUS		
All Chemists		
Employment Status Degree..... Sex	B-1a	40
Plans for Advanced Study Degree..... Sex	B-1b	41
Employment Status Degree..... Citizenship	B-2a	42
Plans for Advanced Study Degree..... Citizenship	B-2b	43
Employment Status Degree..... Ethnicity	B-3a	44
Plans for Advanced Study Degree..... Ethnicity	B-3b	47
Employment Status ACS Approved Curriculum BS.....	B-4a	49
Plans for Advanced Study ACS Approved Curriculum BS.....	B-4b	50
Employment Status Degree Specialty MS	B-5	51
	PhD	52
All Chemical Engineers		
Employment Status Degree..... Sex	B-7a	53
Plans for Advanced Study Degree..... Sex	B-7b	54
Employment Status Degree..... Citizenship	B-8a	55
Plans for Advanced Study Degree..... Citizenship	B-8b	56
Employment Status Degree..... Ethnicity	B-9a	57
Plans for Advanced Study Degree..... Ethnicity	B-9b	58
ADVANCED FURTHER STUDIES		
Part-time Study		
Chemistry Graduates		
Field of Advanced Study Degree..... Sex	C-1	61
	ACS Approved Curriculum BS.....	C-2
Chemical Engineering Graduates		
Field of Advanced Study BS and MS Sex	C-3	63
Full-time Study		
Chemistry Graduates		
Field of Advanced Study Degree..... Sex	C-4	64
	ACS Approved Curriculum BS.....	C-5
Field of Advanced Study BS and MS Sex	C-6	66
Bachelor's Chemists		
Plans for Advanced Study Sex	C-7	67
Bachelor's Chemical Engineers		
Plans for Advanced Study Sex	C-8	68

	Table Number	Page
AGE DISTRIBUTION OF RESPONDENTS		
All Chemistry and Chemical Engineering Graduates		
Age	Sex	69
	BS.....	D-1
	MS.....	D-2
	PhD.....	D-3
		71
Postdoctoral Chemists		
Age	Sex	72
		D-4
NUMBER OF JOB OFFERS		
Full-time Employed Inexperienced Chemists		
Number of Offers	Degree.....	73
	Sex	E-1
Full-time Employed Experienced Chemists		
Number of Offers	Degree.....	74
	Sex	E-2
Full-time Employed Inexperienced Chemical Engineers		
Number of Offers	Degree.....	75
	Sex	E-3
Full-time Employed Experienced Chemical Engineers		
Number of Offers	Degree.....	76
	Sex	E-4
ETHNIC CLASSIFICATION AND CITIZENSHIP		
All Chemistry Graduates		
Citizenship	Degree.....	77
	Ethnicity.....	F-1
	Sex	F-2
		80
Minority Chemistry Graduates		
Minority Classification	Degree.....	81
	Sex	F-3
All Chemical Engineering Graduates		
Citizenship	Degree.....	82
	Ethnicity.....	F-4
	Sex	F-5
		85
Minority Chemical Engineering Graduates		
Minority Classification	Degree.....	86
	Sex	F-6

Table A-1

**SALARIES of CHEMISTS employed FULL-TIME
by DEGREE and EXPERIENCE
1995 ACS Starting Salary Survey**

	Highest Degree		
	BS	MS	PHD
Work Experience			
Less than 12 months			
Median	25,000	36,000	50,000
Mean	25,409	34,760	45,087
Std Dev	5,805	7,736	12,662
Count	348	47	73
12-36 months			
Median	25,000	34,240	53,000
Mean	26,300	35,907	48,738
Std Dev	6,083	7,627	12,323
Count	146	21	21
More than 36 months			
Median	32,850	39,200	47,692
Mean	33,088	40,261	44,798
Std Dev	8,251	12,044	14,315
Count	86	58	35
TOTAL			
Median	25,000	37,000	48,500
Mean	26,772	37,484	45,603
Std Dev	6,823	10,211	13,049
Count	580	126	129

Table A-2

SALARIES of CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and EXPERIENCE
1995 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Work Experience			
Less than 12 months			
Median	40,000	44,200	59,230
Mean	37,571	43,315	56,724
Std Dev	6,397	5,744	7,246
Count	342	22	20
12-36 months			
Median	42,000	44,400	56,000
Mean	40,857	44,255	53,607
Std Dev	6,470	4,779	8,777
Count	178	11	17
More than 36 months			
Median	41,000	46,000	57,400
Mean	40,794	51,345	55,531
Std Dev	5,695	11,084	7,422
Count	29	21	16
TOTAL			
Median	40,500	45,000	58,000
Mean	38,807	46,629	55,364
Std Dev	6,571	8,848	7,779
Count	549	54	53

Table A-3

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
in PRIVATE INDUSTRY by SEX and DEGREE
1995 ACS Starting Salary Survey**

	Highest Degree		
	BS	MS	PHD
Sex			
Male			
Median	26,700	39,000	53,750
Mean	26,976	38,240	52,661
Std Dev	5,957	6,287	8,383
Count	129	15	28
Female			
Median	25,500	37,750	56,000
Mean	26,190	36,187	54,877
Std Dev	5,885	7,857	6,667
Count	123	16	15
TOTAL			
Median	26,000	38,000	54,000
Mean	26,592	37,181	53,434
Std Dev	5,923	7,099	7,819
Count	252	31	43

Table A-4

**SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
in PRIVATE INDUSTRY by SEX and DEGREE
1995 ACS Starting Salary Survey**

	Highest Degree		
	BS	MS	PHD
Sex			
Male			
Median	39,050	44,700	60,540
Mean	37,530	43,821	60,075
Std Dev	6,123	6,296	4,503
Count	208	14	11
Female			
Median	41,500	43,500	59,460
Mean	39,330	43,407	57,153
Std Dev	5,406	3,476	4,471
Count	110	6	3
TOTAL			
Median	40,000	44,200	60,000
Mean	38,153	43,697	59,449
Std Dev	5,938	5,508	4,497
Count	318	20	14

Table A-5

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by SEX and DEGREE
1995 ACS Starting Salary Survey**

	Highest Degree		
	BS	MS	PHD
Sex			
Male			
Median	25,000	36,000	50,000
Mean	26,061	35,166	45,761
Std Dev	5,857	7,781	12,586
Count	165	25	44
Female			
Median	24,000	34,000	45,000
Mean	24,741	34,299	44,064
Std Dev	5,799	7,840	12,930
Count	184	22	29
TOTAL			
Median	25,000	36,000	50,000
Mean	25,365	34,760	45,087
Std Dev	5,855	7,736	12,662
Count	349	47	73

Table A-6

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and EMPLOYER
1995 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Employer			
Industry			
Median	26,000	38,000	54,000
Mean	26,592	37,181	53,434
Std Dev	5,923	7,099	7,819
Count	252	31	43
College or univ			
Median	20,000	31,475	32,000
Mean	19,785	32,408	32,108
Std Dev	3,905	5,939	6,546
Count	21	6	25
High school			
Median	23,544	31,585	---
Mean	23,550	28,528	---
Std Dev	3,641	7,484	---
Count	23	3	0
Federal govt			
Median	23,995	---	---
Mean	23,505	---	---
Std Dev	4,145	---	---
Count	7	0	0
Military			
Median	24,000	45,000	---
Mean	23,357	45,000	---
Std Dev	2,393	---	---
Count	7	1	0
State or local govt			
Median	24,000	26,600	47,000
Mean	24,857	27,700	47,000
Std Dev	5,235	1,992	8,485
Count	9	3	2
Hospital or indep lab			
Median	21,350	25,000	31,000
Mean	21,420	24,333	31,000
Std Dev	4,365	4,041	12,728
Count	24	3	2
Other			
Median	20,000	---	---
Mean	20,640	---	---
Std Dev	4,599	---	---
Count	5	0	0
TOTAL			
Median	25,000	36,000	50,000
Mean	25,366	34,760	45,227
Std Dev	5,864	7,736	12,694
Count	348	47	72

Table A-7

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and TYPE OF INDUSTRY
1995 ACS Starting Salary Survey**

	Highest Degree		
	BS	MS	PHD
Type of Industry			
Nonmanufacturing			
Median	22.500	26.600	50.000
Mean	23.792	26.720	43.375
Std Dev	5.644	2.386	13.426
Count	42	5	8
Aerospace			
Median	20.000	---	---
Mean	20.000	---	---
Std Dev	---	---	---
Count	1	0	0
Basic chemicals			
Median	27.750	---	53.750
Mean	27.875	---	53.750
Std Dev	6.787	---	354
Count	4	0	2
Specialty chemicals			
Median	25.000	37.000	54.000
Mean	26.206	34.667	52.034
Std Dev	5.473	6.807	6.381
Count	42	3	7
Agricultural chemicals			
Median	29.880	---	54.400
Mean	27.498	---	54.400
Std Dev	6.795	---	6.223
Count	8	0	2
Electronics			
Median	36.000	36.000	57.000
Mean	33.750	36.000	56.450
Std Dev	4.500	---	5.126
Count	4	1	4
Petroleum			
Median	25.000	---	54.000
Mean	25.918	---	54.000
Std Dev	5.377	---	---
Count	11	0	1
Pharmaceuticals			
Median	27.000	41.000	58.000
Mean	27.730	40.022	58.238
Std Dev	6.675	6.854	7.196
Count	82	18	13
Plastics			
Median	29.700	33.600	55.860
Mean	27.710	33.600	55.860
Std Dev	5.466	7.920	2.630
Count	10	2	2
Other manuf			
Median	27.250	37.000	47.500
Mean	26.601	35.750	47.250
Std Dev	4.760	4.031	4.022
Count	48	4	6
TOTAL			
Median	26.000	37.500	54.000
Mean	26.585	36.491	52.437
Std Dev	5.991	7.409	9.160
Count	252	33	45

Table A-8

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
in INDUSTRY by DEGREE and EMPLOYER SIZE
1995 ACS Starting Salary Survey**

	Highest Degree		
	BS	MS	PHD
Employer Size			
Less than 500			
Median	23,000	30,000	47,500
Mean	23,699	31,333	44,750
Std Dev	4,583	5,370	9,120
Count	103	12	10
500 to 2,499			
Median	27,000	38,250	50,000
Mean	26,476	35,925	49,900
Std Dev	5,011	5,338	3,647
Count	57	4	5
2,500 to 9,999			
Median	25,688	39,000	54,000
Mean	27,987	40,167	56,524
Std Dev	6,023	4,856	4,849
Count	21	3	10
10,000 to 24,999			
Median	29,940	42,000	61,000
Mean	30,056	43,333	60,560
Std Dev	7,270	7,095	3,342
Count	18	3	5
25,000 or more			
Median	30,000	42,900	57,720
Mean	30,753	42,489	56,355
Std Dev	5,713	4,343	4,404
Count	50	9	13
TOTAL			
Median	26,000	38,000	54,000
Mean	26,572	37,181	53,434
Std Dev	5,942	7,099	7,819
Count	249	31	43

Table A-9

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and WORK FUNCTION
1995 ACS Starting Salary Survey**

	Highest Degree		
	BS	MS	PHD
Work Function			
Teaching			
Median	23,522	30,450	32,000
Mean	23,402	29,476	32,850
Std Dev	3,634	4,617	4,942
Count	24	7	18
Management			
Median	24,000	42,500	41,000
Mean	24,512	42,500	41,000
Std Dev	6,891	3,536	---
Count	12	2	1
Basic research			
Median	23,995	38,350	30,000
Mean	25,120	36,617	37,080
Std Dev	6,236	9,200	16,486
Count	61	6	10
Applied research			
Median	26,250	39,000	54,000
Mean	26,812	36,076	52,756
Std Dev	5,913	7,266	7,348
Count	88	21	38
Production			
Median	24,800	32,250	57,720
Mean	25,440	31,312	47,840
Std Dev	5,808	6,871	20,747
Count	130	8	3
Other			
Median	22,500	37,000	52,500
Mean	23,433	38,200	52,500
Std Dev	5,575	12,244	707
Count	32	3	2
TOTAL			
Median	25,000	36,000	50,000
Mean	25,373	34,760	45,227
Std Dev	5,871	7,736	12,694
Count	347	47	72

Table A-10

SALARIES of INEXPERIENCED B.S. CHEMISTS employed FULL-TIME
by EMPLOYER and CERTIFICATION
1995 ACS Starting Salary Survey

	Curriculum Approved?		TOTAL
	Yes	No	
Employer			
Industry			
Median	27,000	24,000	26,093
Mean	27,006	25,497	26,513
Std Dev	5,773	5,726	5,787
Count	132	64	196
College or univ			
Median	20,000	20,957	20,407
Mean	20,647	20,276	20,488
Std Dev	3,100	2,754	2,851
Count	8	6	14
High school			
Median	21,000	24,717	23,433
Mean	23,541	23,973	23,721
Std Dev	5,258	4,029	4,586
Count	7	5	12
Federal govt			
Median	27,970	20,000	24,441
Mean	27,970	20,000	25,314
Std Dev	4,991	---	5,799
Count	2	1	3
Military			
Median	21,000	24,000	22,500
Mean	21,167	24,000	22,300
Std Dev	1,258	0	1,789
Count	3	2	5
State or local govt			
Median	25,500	22,257	24,200
Mean	26,500	22,257	25,086
Std Dev	4,796	3,031	4,521
Count	4	2	6
Hospital or indep lab			
Median	21,350	18,500	21,350
Mean	22,256	18,500	21,505
Std Dev	4,010	6,028	4,562
Count	16	4	20
Other			
Median	25,000	19,200	20,000
Mean	25,000	17,733	20,640
Std Dev	0	3,258	4,599
Count	2	3	5
TOTAL			
Median	25,000	23,000	25,000
Mean	26,013	24,288	25,438
Std Dev	5,714	5,694	5,754
Count	174	87	261

Table A-11

SALARIES of INEXPERIENCED MS and PhD CHEMISTS employed FULL-TIME
by DEGREE and DEGREE SPECIALTY
1995 ACS Starting Salary Survey

	Highest Degree	
	MS	PHD
Degree Field		
Biochemistry		
Median	37,000	40,000
Mean	35,786	42,835
Std Dev	7,427	10,778
Count	7	7
General chem		
Median	34,000	---
Mean	34,640	---
Std Dev	4,822	---
Count	5	0
Analytical chem		
Median	34,250	51,000
Mean	33,318	47,991
Std Dev	7,449	12,105
Count	14	20
Inorganic chem		
Median	23,750	49,950
Mean	23,750	43,837
Std Dev	5,303	15,256
Count	2	8
Organic chem		
Median	40,000	51,870
Mean	38,433	47,927
Std Dev	8,128	12,625
Count	15	20
Physical chem		
Median	31,585	36,000
Mean	30,528	38,765
Std Dev	6,069	11,711
Count	3	13
Polymer chem		
Median	---	49,750
Mean	---	49,375
Std Dev	---	8,320
Count	0	4
Other chem		
Median	28,000	21,000
Mean	28,000	21,000
Std Dev	---	---
Count	1	1
TOTAL		
Median	36,000	50,000
Mean	34,760	45,087
Std Dev	7,736	12,662
Count	47	73

Table A-12

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and GEOGRAPHIC REGION
1995 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
REGION			
Pacific			
Median	24,000	30,792	47,500
Mean	24,341	30,396	43,500
Std Dev	5,256	8,203	13,743
Count	22	4	8
Mountain			
Median	24,000	25,000	45,900
Mean	24,610	31,333	45,900
Std Dev	4,856	11,846	---
Count	19	3	1
West North Central			
Median	24,000	38,600	50,000
Mean	24,134	38,600	49,700
Std Dev	5,519	849	7,683
Count	37	2	4
West South Central			
Median	23,772	27,900	54,000
Mean	24,593	30,200	50,836
Std Dev	7,339	6,675	10,335
Count	28	4	9
East North Central			
Median	25,750	39,000	42,000
Mean	26,659	36,891	41,481
Std Dev	5,056	7,432	13,766
Count	64	11	14
East South Central			
Median	22,325	33,000	30,672
Mean	22,907	33,000	30,672
Std Dev	5,287	4,243	9,436
Count	18	2	2
Middle Atlantic			
Median	27,750	44,000	54,000
Mean	27,822	43,300	50,650
Std Dev	6,052	6,261	9,630
Count	58	5	13
South Atlantic			
Median	23,500	30,000	38,250
Mean	24,175	30,990	41,800
Std Dev	5,153	4,964	13,475
Count	57	5	10
New England			
Median	27,250	33,250	41,500
Mean	27,538	33,425	45,178
Std Dev	6,363	8,761	16,563
Count	26	8	9
TOTAL			
Median	25,000	35,000	50,000
Mean	25,565	34,642	45,362
Std Dev	5,815	7,938	12,828
Count	329	44	70

Table A-13

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by SEX and DEGREE
1995 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Sex			
Male			
Median	39,000	44,700	59,500
Mean	37,054	43,821	56,876
Std Dev	6,426	6,296	7,929
Count	220	14	16
Female			
Median	40,800	43,500	56,230
Mean	38,448	42,430	56,115
Std Dev	6,262	4,896	4,200
Count	121	8	4
TOTAL			
Median	40,000	44,200	59,230
Mean	37,549	43,315	56,724
Std Dev	6,394	5,744	7,246
Count	341	22	20

Table A-14

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and EMPLOYER
1995 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Employer			
Industry			
Median	40,000	44,200	60,000
Mean	38,174	43,697	59,449
Std Dev	5,941	5,508	4,497
Count	319	20	14
College or univ			
Median	26,000	---	53,200
Mean	25,500	---	57,067
Std Dev	7,767	---	6,871
Count	4	0	3
Federal govt			
Median	30,159	39,500	42,000
Mean	30,159	39,500	42,000
Std Dev	57	9,192	2,828
Count	2	2	2
Military			
Median	29,000	---	---
Mean	28,333	---	---
Std Dev	2,082	---	---
Count	3	0	0
State or local govt			
Median	28,050	---	---
Mean	28,536	---	---
Std Dev	2,952	---	---
Count	8	0	0
Hospital or indep lab			
Median	26,000	---	---
Mean	26,000	---	---
Std Dev	---	---	---
Count	1	0	0
Other			
Median	40,000	---	47,000
Mean	34,004	---	47,000
Std Dev	11,871	---	---
Count	5	0	1
TOTAL			
Median	40,000	44,200	59,230
Mean	37,571	43,315	56,724
Std Dev	6,397	5,744	7,246
Count	342	22	20

Table A-15

**SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and TYPE OF INDUSTRY
1995 ACS Starting Salary Survey**

	Highest Degree		
	BS	MS	PHD
Type of Industry			
Nonmanufacturing			
Median	37.012	43.000	59.000
Mean	35.495	42.420	59.000
Std Dev	6.486	3.865	---
Count	56	5	1
Aerospace			
Median	25.000	---	---
Mean	25.000	---	---
Std Dev	---	---	---
Count	1	0	0
Basic chemicals			
Median	41.250	46.200	---
Mean	40.958	46.200	---
Std Dev	3.086	---	---
Count	24	1	0
Specialty chemicals			
Median	41.500	44.000	56.500
Mean	40.261	44.000	56.500
Std Dev	3.901	---	9.192
Count	57	1	2
Agricultural chemicals			
Median	43.000	---	---
Mean	42.600	---	---
Std Dev	1.673	---	---
Count	5	0	0
Electronics			
Median	38.250	47.500	55.000
Mean	38.006	47.500	55.000
Std Dev	5.114	---	---
Count	18	1	1
Petroleum			
Median	42.300	44.000	---
Mean	41.091	44.000	---
Std Dev	4.541	5.657	---
Count	22	2	0
Pharmaceuticals			
Median	38.500	45.500	65.000
Mean	36.975	46.610	65.000
Std Dev	7.582	8.501	0
Count	20	4	2
Plastics			
Median	40.250	44.000	60.270
Mean	38.567	43.667	60.705
Std Dev	5.991	2.517	2.224
Count	40	3	4
Other manuf			
Median	38.600	43.000	59.730
Mean	36.643	39.567	58.115
Std Dev	6.449	8.394	4.126
Count	75	3	4
TOTAL			
Median	40.000	44.200	60.000
Mean	38.120	43.697	59.449
Std Dev	5.984	5.508	4.497
Count	318	20	14

Table A-16

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and EMPLOYER SIZE
1995 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Employer Size			
Less than 500			
Median	34,000	36,720	57,000
Mean	32,489	37,285	57,000
Std Dev	7,118	6,469	2,828
Count	92	4	2
500 to 2,499			
Median	40,000	46,000	50,000
Mean	37,689	44,333	50,000
Std Dev	5,894	2,887	4,243
Count	67	3	2
2,500 to 9,999			
Median	40,000	44,000	61,000
Mean	39,258	42,140	57,029
Std Dev	4,174	5,287	9,665
Count	52	5	7
10,000 to 24,999			
Median	41,520	44,000	58,500
Mean	40,125	48,333	58,500
Std Dev	4,770	8,386	---
Count	43	3	1
25,000 or more			
Median	42,000	45,200	60,000
Mean	40,607	44,817	59,826
Std Dev	4,304	3,014	3,822
Count	84	6	7
TOTAL			
Median	40,000	44,000	59,460
Mean	37,550	43,178	57,394
Std Dev	6,414	5,849	6,779
Count	338	21	19

Table A-17

**SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and WORK FUNCTION
1995 ACS Starting Salary Survey**

	Highest Degree		
	BS	MS	PHD
Work Function			
Teaching			
Median	---	---	59,000
Mean	---	---	59,000
Std Dev	---	---	8,485
Count	0	0	2
Management			
Median	40,300	49,000	---
Mean	37,553	49,000	---
Std Dev	6,549	12,728	---
Count	16	2	0
Basic research			
Median	26,000	46,000	53,200
Mean	23,760	46,000	52,632
Std Dev	5,260	---	7,768
Count	4	1	5
Applied research			
Median	39,000	44,200	60,000
Mean	38,057	43,321	58,302
Std Dev	5,205	4,826	6,323
Count	117	14	11
Production			
Median	40,300	43,000	65,000
Mean	38,146	42,360	65,000
Std Dev	6,583	3,927	---
Count	148	4	1
Other			
Median	36,600	33,000	47,000
Mean	35,788	33,000	47,000
Std Dev	7,100	---	---
Count	54	1	1
TOTAL			
Median	40,000	44,200	59,230
Mean	37,542	43,315	56,724
Std Dev	6,418	5,744	7,246
Count	339	22	20

Table A-18

**SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and GEOGRAPHIC REGION
1995 ACS Starting Salary Survey**

	Highest Degree		
	BS	MS	PHD
REGION			
Pacific			
Median	39,950	45,950	61,000
Mean	37,894	45,950	59,840
Std Dev	5,471	2,192	5,525
Count	16	2	5
Mountain			
Median	39,140	---	---
Mean	35,471	---	---
Std Dev	7,245	---	---
Count	9	0	0
West North Central			
Median	38,500	42,500	60,000
Mean	38,387	42,500	60,000
Std Dev	6,114	---	764
Count	27	1	2
West South Central			
Median	42,000	43,100	54,250
Mean	39,954	41,050	54,250
Std Dev	5,857	8,125	6,010
Count	64	4	2
East North Central			
Median	38,300	44,500	53,000
Mean	36,456	43,110	54,800
Std Dev	6,733	4,036	8,044
Count	70	4	5
East South Central			
Median	37,000	46,000	---
Mean	36,771	46,000	---
Std Dev	5,733	---	---
Count	21	1	0
Middle Atlantic			
Median	38,100	44,000	61,890
Mean	36,720	45,200	61,890
Std Dev	6,998	7,981	2,673
Count	59	5	2
South Atlantic			
Median	41,000	44,000	47,000
Mean	37,912	41,067	50,000
Std Dev	7,116	7,072	11,790
Count	46	3	3
New England			
Median	38,250	43,350	59,000
Mean	37,164	43,350	59,000
Std Dev	3,782	3,323	---
Count	22	2	1
TOTAL			
Median	40,000	44,200	59,230
Mean	37,638	43,315	56,724
Std Dev	6,433	5,744	7,246
Count	334	22	20

Table A-19

**SALARIES of NEW GRADUATES ON GRADUATE ASSISTANTSHIPS, FELLOWSHIPS
or POSTDOCTORAL FELLOWSHIPS by DEGREE AND FIELD
1995 ACS Starting Salary Survey**

	FIELD	
	CHEM ENG	CHEMISTRY
Highest Degree		
BS		
Median	15,000	14,050
Mean	15,213	14,106
Std Dev	4,178	3,859
Count	142	730
MS		
Median	15,000	14,000
Mean	15,732	14,439
Std Dev	5,471	3,990
Count	47	92
PHD		
Median	27,000	24,000
Mean	29,929	25,340
Std Dev	8,579	6,074
Count	22	157

Table B-1a

CHEMISTRY GRADUATES
by EMPLOYMENT STATUS, SEX, and DEGREE
1995 ACS Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Full-Time in Chemistry	24.9% 303	28.0% 295	26.3% 598	44.6% 75	42.1% 56	43.5% 131	36.9% 83	45.5% 51	39.8% 134
Full-Time in Non-Chemistry	9.4% 114	9.1% 96	9.2% 210	8.9% 15	6.0% 8	7.6% 23	2.2% 5	.0% 0	1.5% 5
Fellowship	30.6% 372	24.5% 258	27.7% 630	28.0% 47	24.1% 32	26.2% 79	38.7% 87	30.4% 34	35.9% 121
Seeking Employment	12.5% 152	16.9% 178	14.5% 330	11.9% 20	18.0% 24	14.6% 44	21.8% 49	18.8% 21	20.8% 70
Not Seeking Employment	22.7% 276	21.5% 227	22.1% 503	6.5% 11	9.8% 13	8.0% 24	.4% 1	5.4% 6	2.1% 7
Total	100.0% 53.6% 1217	100.0% 46.4% 1054	100.0% 100.0% 2271	100.0% 55.8% 168	100.0% 44.2% 133	100.0% 100.0% 301	100.0% 66.8% 225	100.0% 33.2% 112	100.0% 100.0% 337

Table B-1b

CHEMISTRY GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1995, SEX, and DEGREE
1995 ACS Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
	Pursue Advanced Studies in Fall 1995								
Yes, full-time	53.0% 703	43.1% 502	48.4% 1205	35.5% 61	32.1% 45	34.0% 106	15.3% 34	7.1% 8	12.6% 42
Yes, part-time	7.8% 104	8.0% 93	7.9% 197	4.1% 7	7.9% 11	5.8% 18	1.4% 3	1.8% 2	1.5% 5
No	39.2% 520	48.9% 569	43.7% 1089	60.5% 104	60.0% 84	60.3% 188	83.3% 185	91.1% 102	85.9% 287
Total	100.0% 53.3% 1327	100.0% 46.7% 1164	100.0% 100.0% 2491	100.0% 55.1% 172	100.0% 44.9% 140	100.0% 100.0% 312	100.0% 66.5% 222	100.0% 33.5% 112	100.0% 100.0% 334

Table B-2a

CHEMISTRY GRADUATES
by EMPLOYMENT STATUS, CITIZENSHIP, and DEGREE
1995 ACS Starting Salary Survey

	Citizenship				Total
	U.S. Native	U.S. Natural- ized	U.S. Permanent Resident	Other Visa	
Bachelors					
Full-Time in Chemistry	26.8% 544	29.5% 39	18.8% 13	3.0% 1	26.3% 597
Full-Time in Non-Chemistry	9.6% 195	8.3% 11	5.8% 4	.0% 0	9.3% 210
Fellowship	28.3% 575	18.9% 25	18.8% 13	48.5% 16	27.8% 629
Seeking Employment	13.5% 275	18.9% 25	26.1% 18	30.3% 10	14.5% 328
Not Seeking Employment	21.8% 443	24.2% 32	30.4% 21	18.2% 6	22.2% 502
Masters					
Full-Time in Chemistry	49.5% 94	54.5% 6	50.0% 16	22.1% 15	43.5% 131
Full-Time in Non-Chemistry	10.5% 20	9.1% 1	6.3% 2	.0% 0	7.6% 23
Fellowship	21.6% 41	18.2% 2	12.5% 4	47.1% 32	26.2% 79
Seeking Employment	11.1% 21	18.2% 2	25.0% 8	19.1% 13	14.6% 44
Not Seeking Employment	7.4% 14	.0% 0	6.3% 2	11.8% 8	8.0% 24
Doctorate					
Full-Time in Chemistry	49.3% 101	46.2% 6	28.6% 18	16.1% 9	39.8% 134
Full-Time in Non-Chemistry	1.0% 2	7.7% 1	1.6% 1	1.8% 1	1.5% 5
Fellowship	31.7% 65	23.1% 3	34.9% 22	55.4% 31	35.9% 121
Seeking Employment	16.1% 33	23.1% 3	30.2% 19	26.8% 15	20.8% 70
Not Seeking Employment	2.0% 4	.0% 0	4.8% 3	.0% 0	2.1% 7
Total	100.0% 83.6% 2427	100.0% 5.4% 156	100.0% 5.6% 164	100.0% 5.4% 157	100.0% 100.0% 2904

Table B-2b

CHEMISTRY GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1995, CITIZENSHIP, and DEGREE
1995 ACS Starting Salary Survey

	Citizenship				Total
	U.S. Native	U.S. Natural- ized	U.S. Permanent Resident	Other Visa	
Bachelors					
Pursue Advanced Studies in Fall 1995					
Yes, full-time	48.5% 1079	40.8% 62	49.3% 37	69.4% 25	48.4% 1203
Yes, part-time	7.3% 163	14.5% 22	12.0% 9	8.3% 3	7.9% 197
No	44.1% 981	44.7% 68	38.7% 29	22.2% 8	43.7% 1086
Masters					
Pursue Advanced Studies in Fall 1995					
Yes, full-time	25.8% 51	27.3% 3	25.0% 8	62.0% 44	34.0% 106
Yes, part-time	6.1% 12	18.2% 2	3.1% 1	4.2% 3	5.8% 18
No	68.2% 135	54.5% 6	71.9% 23	33.8% 24	60.3% 188
Doctorate					
Pursue Advanced Studies in Fall 1995					
Yes, full-time	8.9% 18	.0% 0	16.4% 10	24.1% 14	12.6% 42
Yes, part-time	2.5% 5	.0% 0	.0% 0	.0% 0	1.5% 5
No	88.7% 180	100.0% 12	83.6% 51	75.9% 44	85.9% 287
Total	100.0% 83.8% 2624	100.0% 5.6% 175	100.0% 5.4% 168	100.0% 5.3% 165	100.0% 100.0% 3132

Table B-3a

**BACHELORS CHEMISTRY GRADUATES
by EMPLOYMENT STATUS and ETHNICITY
1995 ACS Starting Salary Survey**

	Race									Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	Total	
Full-Time in Chemistry	16.7% 2	21.9% 14	14.3% 5	24.2% 32	23.5% 20	27.6% 24	27.6% 498	2.5% 1	26.4% 596	
Full-Time in Non-Chemistry	.0% 0	7.8% 5	11.4% 4	8.3% 11	8.2% 7	6.9% 6	9.4% 169	20.0% 8	9.3% 210	
Fellowship	25.0% 3	28.1% 18	25.7% 9	11.4% 15	18.8% 16	28.7% 25	29.5% 533	15.0% 6	27.7% 625	
Seeking Employment	8.3% 1	14.1% 9	5.7% 2	25.0% 33	24.7% 21	14.9% 13	13.2% 238	30.0% 12	14.6% 329	
Not Seeking Employment	50.0% 6	28.1% 18	42.9% 15	31.1% 41	24.7% 21	21.8% 19	20.3% 367	32.5% 13	22.1% 500	
Total	100.0% .5% 12	100.0% 2.8% 64	100.0% 1.5% 35	100.0% 5.8% 132	100.0% 3.8% 85	100.0% 3.8% 87	100.0% 79.9% 1805	100.0% 1.8% 40	100.0% 100.0% 2260	

(continued)

Table B-3a cont.

**MASTERS CHEMISTRY GRADUATES
by EMPLOYMENT STATUS and ETHNICITY
1995 ACS Starting Salary Survey**

	Race										Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other			
Full-Time in Chemistry	100.0% 2	41.0% 25	20.0% 2	23.5% 4	16.7% 1	.0% 0	50.0% 96	33.3% 1			43.7% 131
Full-Time in Non-Chemistry	.0% 0	1.6% 1	.0% 0	.0% 0	.0% 0	.0% 0	11.5% 22	.0% 0			7.7% 23
Fellowship	.0% 0	23.0% 14	60.0% 6	47.1% 8	50.0% 3	77.8% 7	20.8% 40	.0% 0			26.0% 78
Seeking Employment	.0% 0	24.6% 15	10.0% 1	23.5% 4	16.7% 1	.0% 0	11.5% 22	33.3% 1			14.7% 44
Not Seeking Employment	.0% 0	9.8% 6	10.0% 1	5.9% 1	16.7% 1	22.2% 2	6.3% 12	33.3% 1			8.0% 24
Total	100.0% .7% 2	100.0% 20.3% 61	100.0% 3.3% 10	100.0% 5.7% 17	100.0% 2.0% 6	100.0% 3.0% 9	100.0% 64.0% 192	100.0% 1.0% 3			100.0% 100.0% 300

(continued)

Table B-3a cont.

**PHD CHEMISTRY GRADUATES
by EMPLOYMENT STATUS and ETHNICITY
1995 ACS Starting Salary Survey**

	Race							Total
	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Full-Time in Chemistry	25.0% 18	10.0% 1	36.8% 7	80.0% 4	33.3% 4	44.7% 96	66.7% 2	39.3% 132
Full-Time in Non-Chemistry	2.8% 2	.0% 0	.0% 0	.0% 0	.0% 0	1.4% 3	.0% 0	1.5% 5
Fellowship	38.9% 28	60.0% 6	47.4% 9	20.0% 1	50.0% 6	33.0% 71	33.3% 1	36.3% 122
Seeking Employment	29.2% 21	30.0% 3	15.8% 3	.0% 0	16.7% 2	19.1% 41	.0% 0	20.8% 70
Not Seeking Employment	4.2% 3	.0% 0	.0% 0	.0% 0	.0% 0	1.9% 4	.0% 0	2.1% 7
Total	100.0% 21.4% 72	100.0% 3.0% 10	100.0% 5.7% 19	100.0% 1.5% 5	100.0% 3.6% 12	100.0% 64.0% 215	100.0% .9% 3	100.0% 100.0% 336

Table B-3b

**CHEMISTRY GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1995, ETHNICITY, and DEGREE
1995 ACS Starting Salary Survey**

	Race								Total	
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other		
Bachelors										
Pursue Advanced Studies in Fall 1995	61.5% 8	52.9% 37	66.7% 26	41.0% 64	42.7% 38	53.1% 52	48.4% 953	41.9% 18	48.2% 1196	
Yes, full-time										
Yes, part-time	7.7% 1	11.4% 8	5.1% 2	9.6% 15	12.4% 11	10.2% 10	7.3% 143	14.0% 6	7.9% 196	
No	30.8% 4	35.7% 25	28.2% 11	49.4% 77	44.9% 40	36.7% 36	44.4% 875	44.2% 19	43.8% 1087	
Total	100.0% 53	100.0% 70	100.0% 39	100.0% 156	100.0% 89	100.0% 98	100.0% 1971	100.0% 43	100.0% 2479	
Masters										
Pursue Advanced Studies in Fall 1995	.0% 0	41.5% 27	55.6% 5	58.8% 10	83.3% 5	100.0% 9	24.0% 48	33.3% 1	33.8% 105	
Yes, full-time										
Yes, part-time	.0% 0	4.6% 3	.0% 0	.0% 0	16.7% 1	.0% 0	7.0% 14	.0% 0	5.8% 18	
No	100.0% 2	53.8% 35	44.4% 4	41.2% 7	.0% 0	.0% 0	69.0% 138	66.7% 2	60.5% 188	
Total	100.0% 6	100.0% 65	100.0% 9	100.0% 17	100.0% 6	100.0% 9	100.0% 200	100.0% 3	100.0% 311	

(continued)

Table B-3b

CHEMISTRY GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1995, ETHNICITY, and DEGREE
1995 ACS Starting Salary Survey

	Race							Total	
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White		Other
Pursue Advanced Studies in Fall 1995	.0%	17.8%	30.0%	26.3%	.0%	9.1%	9.0%	33.3%	12.7%
Doctorate	0	13	3	5	0	1	19	1	42
Yes, full-time	.0%	.0%	.0%	.0%	.0%	.0%	2.4%	.0%	1.5%
Yes, part-time	0	0	0	0	0	0	5	0	5
No.	.0%	82.2%	70.0%	73.7%	100.0%	90.9%	88.6%	66.7%	85.8%
	0	60	7	14	5	10	187	2	285
Total	.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	0	73	10	19	5	11	211	3	332

Table B-4a

BS CHEMISTRY GRADUATES
by EMPLOYMENT STATUS and CERTIFICATION
1995 ACS Starting Salary Survey

	Curriculum Approved?		Total
	Yes	No	
Full-Time in Chemistry	27.3% 304	27.2% 141	27.3% 445
Full-Time in Non-Chemistry	6.7% 75	15.2% 79	9.4% 154
Fellowship	37.7% 420	16.8% 87	31.0% 507
Seeking Employment	11.6% 129	17.0% 88	13.3% 217
Not Seeking Employment	16.7% 186	23.9% 124	19.0% 310
Total	100.0% 68.2% 1114	100.0% 31.8% 519	100.0% 100.0% 1633

Table B-4b

BS CHEMISTRY GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1995 and CERTIFICATION
1995 ACS Starting Salary Survey

	Curriculum Approved?		Total
	Yes	No	
Pursue Advanced Studies in Fall 1995			
Yes, full-time	54.1% 656	32.8% 281	45.2% 937
Yes, part-time	6.7% 81	6.6% 57	6.7% 138
No	39.2% 476	60.6% 520	48.1% 996
Total	100.0% 58.6% 1213	100.0% 41.4% 858	100.0% 100.0% 2071

Table B-5

MASTERS CHEMISTRY GRADUATES
by EMPLOYMENT STATUS and DEGREE SPECIALTY
1995 ACS Starting Salary Survey

	FT IN CHEM	FT IN NONCHEM	FELLOW- SHIP	SEEK EMPL	NOT SEEK EMPL	Total
Degree Field						
Biochemistry	9.9%	.0%	7.6%	9.1%	16.7%	9.0%
	48.1%	.0%	22.2%	14.8%	14.8%	100.0%
	13	0	6	4	4	27
General chem	19.8%	43.5%	10.1%	11.4%	16.7%	17.6%
	49.1%	18.9%	15.1%	9.4%	7.5%	100.0%
	26	10	8	5	4	53
Analytical chem	29.8%	26.1%	17.7%	22.7%	25.0%	24.9%
	52.0%	8.0%	18.7%	13.3%	8.0%	100.0%
	39	6	14	10	6	75
Inorganic chem	3.1%	.0%	5.1%	20.5%	12.5%	6.6%
	20.0%	.0%	20.0%	45.0%	15.0%	100.0%
	4	0	4	9	3	20
Organic chem	26.7%	4.3%	36.7%	27.3%	12.5%	26.6%
	43.8%	1.3%	36.3%	15.0%	3.8%	100.0%
	35	1	29	12	3	80
Physical chem	3.8%	13.0%	15.2%	6.8%	8.3%	8.3%
	20.0%	12.0%	48.0%	12.0%	8.0%	100.0%
	5	3	12	3	2	25
Polymer chem	3.8%	4.3%	1.3%	2.3%	8.3%	3.3%
	50.0%	10.0%	10.0%	10.0%	20.0%	100.0%
	5	1	1	1	2	10
Other chem	3.1%	8.7%	6.3%	.0%	.0%	3.7%
	36.4%	18.2%	45.5%	.0%	.0%	100.0%
	4	2	5	0	0	11
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	43.5%	7.6%	26.2%	14.6%	8.0%	100.0%
	131	23	79	44	24	301

Table B-6

PhD CHEMISTRY GRADUATES
by EMPLOYMENT STATUS and DEGREE SPECIALTY
1995 ACS Starting Salary Survey

	FT IN CHEM	FT IN NONCHEM	FELLOW- SHIP	SEEK EMPL	NOT SEEK EMPL	Total
Degree Field						
Biochemistry	9.0%	.0%	12.3%	8.6%	14.3%	10.1%
	35.3%	.0%	44.1%	17.6%	2.9%	100.0%
	12	0	15	6	1	34
General chem	.0%	.0%	.8%	.0%	.0%	.3%
	.0%	.0%	100.0%	.0%	.0%	100.0%
	0	0	1	0	0	1
Analytical chem	29.9%	20.0%	10.7%	22.9%	14.3%	21.0%
	56.3%	1.4%	18.3%	22.5%	1.4%	100.0%
	40	1	13	16	1	71
Inorganic chem	11.9%	.0%	20.5%	14.3%	42.9%	16.0%
	29.6%	.0%	46.3%	18.5%	5.6%	100.0%
	16	0	25	10	3	54
Organic chem	23.9%	.0%	33.6%	32.9%	28.6%	29.0%
	32.7%	.0%	41.8%	23.5%	2.0%	100.0%
	32	0	41	23	2	98
Physical chem	16.4%	60.0%	18.9%	18.6%	.0%	18.0%
	36.1%	4.9%	37.7%	21.3%	.0%	100.0%
	22	3	23	13	0	61
Polymer chem	7.5%	20.0%	1.6%	1.4%	.0%	4.1%
	71.4%	7.1%	14.3%	7.1%	.0%	100.0%
	10	1	2	1	0	14
Other chem	1.5%	.0%	1.6%	1.4%	.0%	1.5%
	40.0%	.0%	40.0%	20.0%	.0%	100.0%
	2	0	2	1	0	5
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	39.6%	1.5%	36.1%	20.7%	2.1%	100.0%
	134	5	122	70	7	338

Table B-7a

**CHEMICAL ENGINEERING GRADUATES
by EMPLOYMENT STATUS, SEX, and DEGREE
1995 ACS Starting Salary Survey**

	Bachelors			Masters			Doctorate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Full-Time in Chemistry	48.8% 357	50.9% 203	49.6% 560	39.8% 37	40.9% 18	40.1% 55	61.8% 42	73.3% 11	63.9% 53
Full-Time in Non-Chemistry	13.0% 95	13.8% 55	13.3% 150	8.6% 8	18.2% 8	11.7% 16	5.9% 4	6.7% 1	6.0% 5
Fellowship	11.1% 81	7.0% 28	9.6% 109	29.0% 27	18.2% 8	25.5% 35	17.6% 12	20.0% 3	18.1% 15
Seeking Employment	20.5% 150	22.3% 89	21.2% 239	17.2% 16	11.4% 5	15.3% 21	14.7% 10	.0% 0	12.0% 10
Not Seeking Employment	6.6% 48	6.0% 24	6.4% 72	5.4% 5	11.4% 5	7.3% 10	.0% 0	.0% 0	.0% 0
Total	100.0% 64.7% 731	100.0% 35.3% 399	100.0% 100.0% 1130	100.0% 67.9% 93	100.0% 32.1% 44	100.0% 100.0% 137	100.0% 81.9% 68	100.0% 18.1% 15	100.0% 100.0% 83

Table B-7b

CHEMICAL ENGINEERING GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1995, SEX, and DEGREE
1995 ACS Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Pursue Advanced Studies in Fall 1995	19.3%	13.7%	17.3%	41.7%	27.3%	37.1%	1.5%	.0%	1.2%
Yes, full-time	147	58	205	40	12	52	1	0	1
Yes, part-time	6.3%	4.7%	5.7%	4.2%	6.8%	5.0%	1.5%	.0%	1.2%
	48	20	68	4	3	7	1	0	1
No	74.3%	81.6%	76.9%	54.2%	65.9%	57.9%	97.1%	100.0%	97.6%
	565	345	910	52	29	81	66	15	81
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	64.2%	35.8%	100.0%	68.6%	31.4%	100.0%	81.9%	18.1%	100.0%
	760	423	1183	96	44	140	68	15	83

Table B-8a

CHEMICAL ENGINEERING GRADUATES
by EMPLOYMENT STATUS, CITIZENSHIP, and DEGREE
1995 ACS Starting Salary Survey

	Citizenship				Total
	U.S. Native	U.S. Natural- ized	U.S. Permanent Resident	Other Visa	
Bachelors					
Full-Time in Chemistry	50.1% 513	52.9% 36	52.4% 11	5.6% 1	49.6% 561
Full-Time in Non-Chemistry	13.9% 142	8.8% 6	9.5% 2	.0% 0	13.3% 150
Fellowship	9.6% 98	5.9% 4	4.8% 1	33.3% 6	9.6% 109
Seeking Employment	20.2% 207	26.5% 18	23.8% 5	50.0% 9	21.1% 239
Not Seeking Employment	6.3% 64	5.9% 4	9.5% 2	11.1% 2	6.4% 72
Total	100.0% 90.5% 1024	100.0% 6.0% 68	100.0% 1.9% 21	100.0% 1.6% 18	100.0% 100.0% 1131
Masters					
Full-Time in Chemistry	53.8% 42	28.6% 2	28.6% 2	20.0% 9	40.1% 55
Full-Time in Non-Chemistry	12.8% 10	14.3% 1	42.9% 3	4.4% 2	11.7% 16
Fellowship	24.4% 19	14.3% 1	.0% 0	33.3% 15	25.5% 35
Seeking Employment	5.1% 4	42.9% 3	28.6% 2	26.7% 12	15.3% 21
Not Seeking Employment	3.8% 3	.0% 0	.0% 0	15.6% 7	7.3% 10
Total	100.0% 56.9% 78	100.0% 5.1% 7	100.0% 5.1% 7	100.0% 32.8% 45	100.0% 100.0% 137
Doctorate					
Full-Time in Chemistry	72.5% 29	80.0% 4	56.3% 9	50.0% 11	63.9% 53
Full-Time in Non-Chemistry	5.0% 2	20.0% 1	.0% 0	9.1% 2	6.0% 5
Fellowship	12.5% 5	.0% 0	18.8% 3	31.8% 7	18.1% 15
Seeking Employment	10.0% 4	.0% 0	25.0% 4	9.1% 2	12.0% 10
Total	100.0% 48.2% 40	100.0% 6.0% 5	100.0% 19.3% 16	100.0% 26.5% 22	100.0% 100.0% 83

Table B-8b

CHEMICAL ENGINEERING
by PLANS FOR FURTHER STUDIES IN FALL 1995 CITIZENSHIP, and DEGREE
1995 ACS Starting Salary Survey

	Citizenship				Total
	U.S. Native	U.S. Natural- ized	U.S. Permanent Resident	Other Visa	
Bachelors					
Pursue Advanced Studies in Fall 1995					
Yes, full-time	17.3% 184	10.8% 8	13.0% 3	45.5% 10	17.3% 205
Yes, part-time	5.9% 63	5.4% 4	4.3% 1	.0% 0	5.7% 68
No	76.8% 818	83.8% 62	82.6% 19	54.5% 12	76.9% 911
Total	100.0% 89.9% 1065	100.0% 6.3% 74	100.0% 1.9% 23	100.0% 1.9% 22	100.0% 100.0% 1184
Masters					
Pursue Advanced Studies in Fall 1995					
Yes, full-time	29.6% 24	28.6% 2	14.3% 1	55.6% 25	37.1% 52
Yes, part-time	3.7% 3	.0% 0	14.3% 1	6.7% 3	5.0% 7
No	66.7% 54	71.4% 5	71.4% 5	37.8% 17	57.9% 81
Total	100.0% 57.9% 81	100.0% 5.0% 7	100.0% 5.0% 7	100.0% 32.1% 45	100.0% 100.0% 140
Doctorate					
Pursue Advanced Studies in Fall 1995					
Yes, full-time	.0% 0	.0% 0	6.7% 1	.0% 0	1.2% 1
Yes, part-time	.0% 0	.0% 0	.0% 0	4.5% 1	1.2% 1
No	100.0% 41	100.0% 5	93.3% 14	95.5% 21	97.6% 81
Total	100.0% 49.4% 41	100.0% 6.0% 5	100.0% 18.1% 15	100.0% 26.5% 22	100.0% 100.0% 83

Table B-9a

**BACHELORS CHEMICAL ENGINEERING GRADUATES
by EMPLOYMENT STATUS and ETHNICITY
1995 ACS Starting Salary Survey**

BS	Race									Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	Total	
Full-Time in Chemistry	16.7% 2	21.9% 14	14.3% 5	24.2% 32	23.5% 20	27.6% 24	27.6% 498	2.5% 1	26.4% 596	
Full-Time in Non-Chemistry	.0% 0	7.8% 5	11.4% 4	8.3% 11	8.2% 7	6.9% 6	9.4% 169	20.0% 8	9.3% 210	
Fellowship	25.0% 3	28.1% 18	25.7% 9	11.4% 15	18.8% 16	28.7% 25	29.5% 533	15.0% 6	27.7% 625	
Seeking Employment	8.3% 1	14.1% 9	5.7% 2	25.0% 33	24.7% 21	14.9% 13	13.2% 238	30.0% 12	14.6% 329	
Not Seeking Employment	50.0% 6	28.1% 18	42.9% 15	31.1% 41	24.7% 21	21.8% 19	20.3% 367	32.5% 13	22.1% 500	
Total	100.0% .5% 12	100.0% 2.8% 64	100.0% 1.5% 35	100.0% 5.8% 132	100.0% 3.8% 85	100.0% 3.8% 87	100.0% 79.9% 1805	100.0% 1.8% 40	100.0% 100.0% 2260	

Table B-9a cont.

**MASTERS CHEMICAL ENGINEERING GRADUATES
by EMPLOYMENT STATUS and ETHNICITY
1995 ACS Starting Salary Survey**

	Race								Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Full-Time in Chemistry	100.0% 2	32.0% 8	36.4% 4	9.1% 1	66.7% 2	50.0% 1	48.1% 37	.0% 0	41.0% 55
Full-Time in Non-Chemistry	.0% 0	12.0% 3	.0% 0	9.1% 1	.0% 0	50.0% 1	13.0% 10	33.3% 1	11.9% 16
Fellowship	.0% 0	20.0% 5	27.3% 3	36.4% 4	33.3% 1	.0% 0	27.3% 21	33.3% 1	26.1% 35
Seeking Employment	.0% 0	28.0% 7	18.2% 2	36.4% 4	.0% 0	.0% 0	6.5% 5	33.3% 1	14.2% 19
Not Seeking Employment	.0% 0	8.0% 2	18.2% 2	9.1% 1	.0% 0	.0% 0	5.2% 4	.0% 0	6.7% 9
Total	100.0% 1.5% 2	100.0% 18.7% 25	100.0% 8.2% 11	100.0% 8.2% 11	100.0% 2.2% 3	100.0% 1.5% 2	100.0% 57.5% 77	100.0% 2.2% 3	100.0% 100.0% 134

Table B-9a cont.

PHD CHEMICAL ENGINEERING GRADUATES
by EMPLOYMENT STATUS and ETHNICITY
1995 ACS Starting Salary Survey

	Race							Total
	Amer Indian	Chinese Indian	Subcont Asian	Other Asian	Hisp	White	Other	
Full-Time in Chemistry	.0% 0	35.7% 5	63.6% 7	40.0% 2	100.0% 2	74.5% 35	50.0% 1	63.4% 52
Full-Time in Non-Chemistry	.0% 0	.0% 0	.0% 0	40.0% 2	.0% 0	4.3% 2	50.0% 1	6.1% 5
Fellowship	.0% 0	28.6% 4	36.4% 4	.0% 0	.0% 0	14.9% 7	.0% 0	18.3% 15
Seeking Employment	100.0% 1	35.7% 5	.0% 0	20.0% 1	.0% 0	6.4% 3	.0% 0	12.2% 10
Total	100.0% 1.2% 1	100.0% 17.1% 14	100.0% 13.4% 11	100.0% 6.1% 5	100.0% 2.4% 2	100.0% 57.3% 47	100.0% 2.4% 2	100.0% 100.0% 82

Table B-9b

CHEMICAL ENGINEERING GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1995, ETHNICITY, and DEGREE
1995 ACS Starting Salary Survey

	Race								Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Bachelors									
Pursue Advanced Studies in Fall 1995									
Yes, full-time	60.0% 3	25.0% 10	34.5% 10	13.7% 7	11.4% 5	32.1% 9	16.2% 157	23.1% 3	17.3% 204
Yes, part-time	.0% 0	5.0% 2	3.4% 1	5.9% 3	6.8% 3	3.6% 1	5.8% 56	.0% 0	5.6% 66
No	40.0% 2	70.0% 28	62.1% 18	80.4% 41	81.8% 36	64.3% 18	78.0% 754	76.9% 10	77.1% 907
Total	100.0% .4% 5	100.0% 3.4% 40	100.0% 2.5% 29	100.0% 4.3% 51	100.0% 3.7% 44	100.0% 2.4% 28	100.0% 82.2% 967	100.0% 1.1% 13	100.0% 100.0% 1177
Masters									
Pursue Advanced Studies in Fall 1995									
Yes, full-time	.0% 0	36.0% 9	50.0% 6	63.6% 7	33.3% 1	.0% 0	32.9% 26	66.7% 2	37.2% 51
Yes, part-time	.0% 0	12.0% 3	8.3% 1	.0% 0	.0% 0	.0% 0	3.8% 3	.0% 0	5.1% 7
No	100.0% 2	52.0% 13	41.7% 5	36.4% 4	66.7% 2	100.0% 2	63.3% 50	33.3% 1	57.7% 79
Total	100.0% 1.5% 2	100.0% 18.2% 25	100.0% 8.8% 12	100.0% 8.0% 11	100.0% 2.2% 3	100.0% 1.5% 2	100.0% 57.7% 79	100.0% 2.2% 3	100.0% 100.0% 137
Doctorate									
Pursue Advanced Studies in Fall 1995									
Yes, full-time	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	2.1% 1	.0% 0	1.2% 1
Yes, part-time	.0% 0	.0% 0	10.0% 1	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	1.2% 1
No	100.0% 1	100.0% 14	90.0% 9	100.0% 5	.0% 0	100.0% 2	97.9% 47	100.0% 2	97.6% 80
Total	100.0% 1.2% 1	100.0% 17.1% 14	100.0% 12.2% 10	100.0% 6.1% 5	.0% .0% 0	100.0% 2.4% 2	100.0% 58.5% 48	100.0% 2.4% 2	100.0% 100.0% 82

Table C-1

CHEMISTRY GRADUATES WHO PLAN PART-TIME STUDIES IN FALL 1995
by FIELD OF ADVANCED STUDY, DEGREE, and SEX
1995 ACS Starting Salary Survey

Field of Study	BS			MS			PHD		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Chemistry	37.2% 35	26.4% 23	32.0% 58	.0% 0	33.3% 3	18.8% 3	33.3% 1	.0% 0	20.0% 1
Other phys sci	5.3% 5	5.7% 5	5.5% 10	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Chem or biochem eng	6.4% 6	1.1% 1	3.9% 7	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Other eng	3.2% 3	.0% 0	1.7% 3	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Biochemistry	5.3% 5	13.8% 12	9.4% 17	28.6% 2	22.2% 2	25.0% 4	.0% 0	.0% 0	.0% 0
Life science	6.4% 6	9.2% 8	7.7% 14	.0% 0	11.1% 1	6.3% 1	.0% 0	.0% 0	.0% 0
Medicine	6.4% 6	3.4% 3	5.0% 9	.0% 0	11.1% 1	6.3% 1	.0% 0	.0% 0	.0% 0
Dentistry	.0% 0	1.1% 1	.6% 1	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Pharmacy	4.3% 4	5.7% 5	5.0% 9	14.3% 1	.0% 0	6.3% 1	.0% 0	.0% 0	.0% 0
Business	10.6% 10	11.5% 10	11.0% 20	14.3% 1	.0% 0	6.3% 1	33.3% 1	100.0% 2	60.0% 3
Education	5.3% 5	6.9% 6	6.1% 11	14.3% 1	11.1% 1	12.5% 2	.0% 0	.0% 0	.0% 0
Law	.0% 0	1.1% 1	.6% 1	14.3% 1	11.1% 1	12.5% 2	33.3% 1	.0% 0	20.0% 1
Other	9.6% 9	13.8% 12	11.6% 21	14.3% 1	.0% 0	6.3% 1	.0% 0	.0% 0	.0% 0
Total	100.0% 94	100.0% 87	100.0% 181	100.0% 7	100.0% 9	100.0% 16	100.0% 3	100.0% 2	100.0% 5

Table C-2

BS CHEMISTRY GRADUATES WHO PLAN PART-TIME STUDIES IN FALL 1995
by FIELD OF ADVANCED STUDY and CERTIFICATION
1995 ACS Starting Salary Survey

	Curriculum Approved?		Total
	Yes	No	
Field of Further Studies			
Chemistry	39.0% 30	26.9% 28	32.0% 58
Other phys sci	3.9% 3	6.7% 7	5.5% 10
Chem or biochem eng	3.9% 3	3.8% 4	3.9% 7
Other eng	2.6% 2	1.0% 1	1.7% 3
Biochemistry	6.5% 5	11.5% 12	9.4% 17
Life science	3.9% 3	10.6% 11	7.7% 14
Medicine	2.6% 2	6.7% 7	5.0% 9
Dentistry	.0% 0	1.0% 1	.6% 1
Pharmacy	7.8% 6	2.9% 3	5.0% 9
Business	9.1% 7	12.5% 13	11.0% 20
Education	10.4% 8	2.9% 3	6.1% 11
Law	1.3% 1	.0% 0	.6% 1
Other	9.1% 7	13.5% 14	11.6% 21
Total	100.0% 77	100.0% 104	100.0% 181

Table C-3

CHEMICAL ENGINEERING GRADUATES WHO PLAN PART-TIME STUDIES IN FALL 1995
by FIELD OF ADVANCED STUDY, SEX, and DEGREE
1995 ACS Starting Salary Survey

	BS			MS		
	Male	Female	Total	Male	Female	Total
Field of Further Studies						
Chemistry	2.2% 1	.0% 0	1.5% 1	.0% 0	.0% 0	.0% 0
Other phys sci	.0% 0	.0% 0	.0% 0	33.3% 1	.0% 0	16.7% 1
Chem or biochem eng	35.6% 16	35.0% 7	35.4% 23	66.7% 2	66.7% 2	66.7% 4
Other eng	11.1% 5	15.0% 3	12.3% 8	.0% 0	.0% 0	.0% 0
Life science	.0% 0	5.0% 1	1.5% 1	.0% 0	.0% 0	.0% 0
Medicine	2.2% 1	5.0% 1	3.1% 2	.0% 0	.0% 0	.0% 0
Business	37.8% 17	35.0% 7	36.9% 24	.0% 0	33.3% 1	16.7% 1
Law	4.4% 2	5.0% 1	4.6% 3	.0% 0	.0% 0	.0% 0
Other	6.7% 3	.0% 0	4.6% 3	.0% 0	.0% 0	.0% 0
Total	100.0% 45	100.0% 20	100.0% 65	100.0% 3	100.0% 3	100.0% 6

Table C-4

CHEMISTRY GRADUATES WHO PLAN FULL-TIME STUDIES IN FALL 1995
by FIELD OF ADVANCED STUDY, DEGREE, and SEX
1995 ACS Starting Salary Survey

	BS			MS			PHD		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Field of Further Studies Chemistry	46.6% 326	35.8% 177	42.1% 503	73.3% 44	68.9% 31	71.4% 75	63.6% 21	75.0% 6	65.9% 27
Other phys sci	1.0% 7	1.4% 14	1.2% 14	.0% 0	2.2% 1	1.0% 1	.0% 0	.0% 0	.0% 0
Chem or biochem eng	1.1% 8	1.0% 5	1.1% 13	1.7% 1	.0% 0	1.0% 1	3.0% 1	.0% 0	2.4% 1
Other eng	.9% 6	.8% 4	.8% 10	3.3% 2	.0% 0	1.9% 2	.0% 0	.0% 0	.0% 0
Biochemistry	7.6% 53	13.2% 65	9.9% 118	5.0% 3	15.6% 7	9.5% 10	18.2% 6	12.5% 1	17.1% 7
Life science	2.6% 18	3.2% 16	2.8% 34	.0% 0	.0% 0	.0% 0	3.0% 1	.0% 0	2.4% 1
Medicine	29.1% 204	25.3% 125	27.6% 329	5.0% 3	4.4% 2	4.8% 5	.0% 0	12.5% 1	2.4% 1
Dentistry	2.3% 16	1.6% 8	2.0% 24	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Pharmacy	1.7% 12	3.4% 17	2.4% 29	3.3% 2	2.2% 1	2.9% 3	.0% 0	.0% 0	.0% 0
Business	.9% 6	.4% 2	.7% 8	1.7% 1	.0% 0	1.0% 1	3.0% 1	.0% 0	2.4% 1
Education	.7% 5	3.6% 18	1.9% 23	3.3% 2	2.2% 1	2.9% 3	.0% 0	.0% 0	.0% 0
Law	1.1% 8	.4% 2	.8% 10	1.7% 1	.0% 0	1.0% 1	6.1% 2	.0% 0	4.9% 2
Other	4.4% 31	9.7% 48	6.6% 79	1.7% 1	4.4% 2	2.9% 3	3.0% 1	.0% 0	2.4% 1
Total	100.0% 700	100.0% 494	100.0% 1194	100.0% 60	100.0% 45	100.0% 105	100.0% 33	100.0% 8	100.0% 41

Table C-5

**BS CHEMISTRY GRADUATES WHO PLAN FULL-TIME STUDIES IN FALL 1995
by FIELD OF ADVANCED STUDY and CERTIFICATION
1995 ACS Starting Salary Survey**

	Curriculum Approved?		Total
	Yes	No	
Field of Further Studies			
Chemistry	59.4% 387	19.2% 41	49.4% 428
Other phys sci	.8% 5	.9% 2	.8% 7
Chem or biochem eng	.8% 5	2.8% 6	1.3% 11
Other eng	1.2% 8	.5% 1	1.0% 9
Biochemistry	8.6% 56	14.0% 30	9.9% 86
Life science	1.4% 9	4.7% 10	2.2% 19
Medicine	17.5% 114	35.0% 75	21.8% 189
Dentistry	1.2% 8	4.2% 9	2.0% 17
Pharmacy	2.0% 13	2.8% 6	2.2% 19
Business	.5% 3	.9% 2	.6% 5
Education	1.7% 11	2.3% 5	1.8% 16
Law	.6% 4	1.9% 4	.9% 8
Other	4.4% 29	10.7% 23	6.0% 52
Total	100.0% 652	100.0% 214	100.0% 866

CHEMICAL ENGINEERING GRADUATES WHO PLAN FULL-TIME STUDIES IN FALL 1995
by FIELD OF ADVANCED STUDY, SEX, and DEGREE
1995 ACS Starting Salary Survey

	BS			MS		
	Male	Female	Total	Male	Female	Total
Field of Further Studies						
Chemistry	.0% 0	.0% 0	.0% 0	2.5% 1	.0% 0	1.9% 1
Other phys sci	1.4% 2	.0% 0	1.0% 2	.0% 0	.0% 0	.0% 0
Chem or biochem eng	63.0% 92	50.0% 29	59.3% 121	92.5% 37	91.7% 11	92.3% 48
Other eng	11.6% 17	15.5% 9	12.7% 26	2.5% 1	.0% 0	1.9% 1
Biochemistry	.0% 0	1.7% 1	.5% 1	.0% 0	.0% 0	.0% 0
Life science	.7% 1	.0% 0	.5% 1	.0% 0	.0% 0	.0% 0
Medicine	10.3% 15	8.6% 5	9.8% 20	.0% 0	.0% 0	.0% 0
Dentistry	.7% 1	5.2% 3	2.0% 4	.0% 0	.0% 0	.0% 0
Pharmacy	.0% 0	1.7% 1	.5% 1	.0% 0	.0% 0	.0% 0
Business	2.7% 4	10.3% 6	4.9% 10	2.5% 1	.0% 0	1.9% 1
Law	5.5% 8	1.7% 1	4.4% 9	.0% 0	.0% 0	.0% 0
Other	4.1% 6	5.2% 3	4.4% 9	.0% 0	8.3% 1	1.9% 1
Total	100.0% 146	100.0% 58	100.0% 204	100.0% 40	100.0% 12	100.0% 52

Table C-7

**BS CHEMISTRY GRADUATES WHO ARE NOT EMPLOYED AND NOT SEEKING EMPLOYMENT
by SEX and PLANS FOR FURTHER STUDIES
1995 ACS Starting Salary Survey**

	SEX		Total
	Male	Female	
Plans to Study in the Fall of 1995			
Yes, full-time	63.8% 164	52.0% 119	58.2% 283
Yes, part-time	3.5% 9	4.4% 10	3.9% 19
No	32.7% 84	43.7% 100	37.9% 184
Total	100.0% 52.9% 257	100.0% 47.1% 229	100.0% 100.0% 486

Table C-8

BS CHEMICAL ENGINEERING GRADUATES
WHO ARE NOT EMPLOYED AND NOT SEEKING EMPLOYMENT
by SEX and PLANS FOR FURTHER STUDIES
1995 ACS Starting Salary Survey

	SEX		Total
	Male	Female	
Plans to study in the Fall of 1995			
Yes, full-time	17.9% 20	24.6% 16	20.3% 36
Yes, part-time	4.5% 5	.0% 0	2.8% 5
No	77.7% 87	75.4% 49	76.8% 136
Total	100.0% 63.3% 112	100.0% 36.7% 65	100.0% 100.0% 177

Table D-1

BS CHEMISTRY AND CHEMICAL ENGINEERING GRADUATES
by AGE and SEX
1995 ACS Starting Salary Survey

	FIELD					
	CHEM ENG			CHEMISTRY		
	Male	Female	Total	Male	Female	Total
under 20	.1% 1	.0% 0	.1% 1	.3% 4	.2% 2	.2% 6
20	.4% 3	.5% 2	.4% 5	1.1% 15	1.4% 16	1.2% 31
21	7.2% 55	11.1% 47	8.6% 102	10.4% 138	18.0% 210	14.0% 348
22	33.0% 251	36.7% 155	34.3% 406	42.7% 567	45.4% 529	44.0% 1096
23	32.2% 245	34.1% 144	32.9% 389	17.8% 236	15.8% 184	16.8% 420
24	11.4% 87	6.6% 28	9.7% 115	8.2% 109	5.7% 66	7.0% 175
25	3.4% 26	3.8% 16	3.6% 42	3.8% 51	2.4% 28	3.2% 79
26	2.4% 18	1.2% 5	1.9% 23	3.0% 40	1.6% 19	2.4% 59
27	1.8% 14	1.2% 5	1.6% 19	2.4% 32	1.6% 19	2.0% 51
28	2.2% 17	1.4% 6	1.9% 23	1.7% 22	.6% 7	1.2% 29
29	1.3% 10	.5% 2	1.0% 12	1.4% 18	.8% 9	1.1% 27
30 to 34	2.9% 22	1.9% 8	2.5% 30	4.0% 53	3.4% 40	3.7% 93
35 to 39	.8% 6	.9% 4	.8% 10	1.6% 21	1.5% 17	1.5% 38
40 to 49	.7% 5	.0% 0	.4% 5	1.5% 20	1.6% 19	1.6% 39
50 to 59	.1% 1	.0% 0	.1% 1	.1% 1	.0% 0	.0% 1
65 to 69	.0% 0	.0% 0	.0% 0	.1% 1	.0% 0	.0% 1
Total	100.0% 761	100.0% 422	100.0% 1183	100.0% 1328	100.0% 1165	100.0% 2493

Table D-2

MS CHEMISTRY AND CHEMICAL ENGINEERING GRADUATES
by AGE and SEX
1995 ACS Starting Salary Survey

	FIELD					
	CHEM ENG			CHEMISTRY		
	Male	Female	Total	Male	Female	Total
21	.0% 0	.0% 0	.0% 0	.0% 0	.7% 1	.3% 1
22	2.1% 2	2.3% 1	2.1% 3	1.2% 2	.7% 1	1.0% 3
23	3.1% 3	2.3% 1	2.9% 4	1.7% 3	.7% 1	1.3% 4
24	15.6% 15	18.2% 8	16.4% 23	5.8% 10	6.4% 9	6.1% 19
25	15.6% 15	25.0% 11	18.6% 26	13.4% 23	15.0% 21	14.1% 44
26	15.6% 15	2.3% 1	11.4% 16	11.6% 20	12.9% 18	12.2% 38
27	7.3% 7	4.5% 2	6.4% 9	9.9% 17	11.4% 16	10.6% 33
28	2.1% 2	4.5% 2	2.9% 4	6.4% 11	9.3% 13	7.7% 24
29	6.3% 6	11.4% 5	7.9% 11	7.0% 12	5.0% 7	6.1% 19
30 to 34	26.0% 25	18.2% 8	23.6% 33	22.1% 38	20.0% 28	21.2% 66
35 to 39	4.2% 4	6.8% 3	5.0% 7	12.2% 21	10.7% 15	11.5% 36
40 to 49	2.1% 2	4.5% 2	2.9% 4	7.0% 12	5.7% 8	6.4% 20
50 to 59	.0% 0	.0% 0	.0% 0	1.7% 3	1.4% 2	1.6% 5
Total	100.0% 96	100.0% 44	100.0% 140	100.0% 172	100.0% 140	100.0% 312

Table D-3

PHD CHEMISTRY AND CHEMICAL ENGINEERING GRADUATES
by AGE and SEX
1995 ACS Starting Salary Survey

	FIELD					
	CHEM ENG			CHEMISTRY		
	Male	Female	Total	Male	Female	Total
23	1.4% 1	.0% 0	1.2% 1	.0% 0	.0% 0	.0% 0
24	.0% 0	.0% 0	.0% 0	.4% 1	.9% 1	.6% 2
25	.0% 0	.0% 0	.0% 0	.9% 2	.0% 0	.6% 2
26	5.8% 4	.0% 0	4.8% 4	4.0% 9	6.0% 7	4.7% 16
27	11.6% 8	13.3% 2	11.9% 10	13.2% 30	9.5% 11	12.0% 41
28	13.0% 9	40.0% 6	17.9% 15	13.7% 31	20.7% 24	16.0% 55
29	15.9% 11	20.0% 3	16.7% 14	15.0% 34	7.8% 9	12.5% 43
30 to 34	33.3% 23	26.7% 4	32.1% 27	37.9% 86	36.2% 42	37.3% 128
35 to 39	13.0% 9	.0% 0	10.7% 9	10.1% 23	12.1% 14	10.8% 37
40 to 49	4.3% 3	.0% 0	3.6% 3	4.4% 10	6.9% 8	5.2% 18
50 to 59	1.4% 1	.0% 0	1.2% 1	.4% 1	.0% 0	.3% 1
Total	100.0% 69	100.0% 15	100.0% 84	100.0% 227	100.0% 116	100.0% 343

Table D-4

POSTDOC CHEMISTRY AND CHEMICAL ENGINEERING GRADUATES
by AGE and SEX
1995 ACS Starting Salary Survey

	FIELD		
	CHEMISTRY		
	Male	Female	Total
26	.0% 0	25.0% 1	11.1% 1
28	20.0% 1	25.0% 1	22.2% 2
30 to 34	20.0% 1	.0% 0	11.1% 1
35 to 39	40.0% 2	50.0% 2	44.4% 4
40 to 49	20.0% 1	.0% 0	11.1% 1
Total	100.0% 5	100.0% 4	100.0% 9

Table E-1

FULL-TIME EMPLOYED INEXPERIENCED CHEMISTS
by AGE and SEX
1995 ACS Starting Salary Survey

	Highest Degree											
	BS			MS			PHD					
	Male	Female	Total	Male	Female	Total	Male	Female	Total			
1	52.6% 81	48.8% 83	50.6% 164	40.9% 9	28.6% 6	34.9% 15	56.1% 23	69.0% 20	61.4% 43			
2	24.7% 38	27.6% 47	26.2% 85	27.3% 6	38.1% 8	32.6% 14	29.3% 12	17.2% 5	24.3% 17			
3	16.9% 26	15.3% 26	16.0% 52	13.6% 3	23.8% 5	18.6% 8	12.2% 5	6.9% 2	10.0% 7			
4	3.2% 5	4.1% 7	3.7% 12	13.6% 3	4.8% 1	9.3% 4	2.4% 1	6.9% 2	4.3% 3			
5	.6% 1	2.4% 4	1.5% 5	4.5% 1	4.8% 1	4.7% 2	.0% 0	.0% 0	.0% 0			
6 or 7	.0% 0	1.2% 2	.6% 2	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0			
8 or 9	1.3% 2	.0% 0	.6% 2	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0			
10 OR MORE	.6% 1	.6% 1	.6% 2	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0			
Total	100.0% 154	100.0% 170	100.0% 324	100.0% 22	100.0% 21	100.0% 43	100.0% 41	100.0% 29	100.0% 70			

Table E-2

FULL-TIME EMPLOYED EXPERIENCED CHEMISTS
by AGE and SEX
1995 ACS Starting Salary Survey

	Highest Degree											
	BS			MS			PHD					
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	41.1% 44	41.6% 37	41.3% 81	47.4% 18	52.0% 13	49.2% 31	53.6% 15	57.1% 12	55.1% 27			
2	30.8% 33	33.7% 30	32.1% 63	34.2% 13	32.0% 8	33.3% 21	35.7% 10	42.9% 9	38.8% 19			
3	16.8% 18	15.7% 14	16.3% 32	10.5% 4	12.0% 3	11.1% 7	7.1% 2	.0% 0	4.1% 2			
4	6.5% 7	4.5% 4	5.6% 11	2.6% 1	4.0% 1	3.2% 2	3.6% 1	.0% 0	2.0% 1			
5	1.9% 2	2.2% 2	2.0% 4	2.6% 1	.0% 0	1.6% 1	.0% 0	.0% 0	.0% 0			
6 or 7	.9% 1	2.2% 2	1.5% 3	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0			
10 OR MORE	1.9% 2	.0% 0	1.0% 2	2.6% 1	.0% 0	1.6% 1	.0% 0	.0% 0	.0% 0			
Total	100.0% 107	100.0% 89	100.0% 196	100.0% 38	100.0% 25	100.0% 63	100.0% 28	100.0% 21	100.0% 49			

Table E-3

FULL-TIME EMPLOYED INEXPERIENCED CHEMICAL ENGINEERS
by DEGREE and SEX
1995 ACS Starting Salary Survey

	Highest Degree									
	BS			MS			PHD			
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Total
1	56.8% 121	46.6% 54	53.2% 175	50.0% 7	75.0% 6	59.1% 13	50.0% 8	25.0% 1	59.1% 13	45.0% 9
2	27.2% 58	25.0% 29	26.4% 87	28.6% 4	12.5% 1	22.7% 5	31.3% 5	.0% 0	22.7% 5	25.0% 5
3	10.3% 22	13.8% 16	11.6% 38	14.3% 2	.0% 0	9.1% 2	6.3% 1	25.0% 1	9.1% 2	10.0% 2
4	3.3% 7	6.9% 8	4.6% 15	7.1% 1	.0% 0	4.5% 1	6.3% 1	.0% 0	4.5% 1	5.0% 1
5	.9% 2	3.4% 4	1.8% 6	.0% 0	.0% 0	.0% 0	6.3% 1	25.0% 1	.0% 0	10.0% 2
6 or 7	.5% 1	3.4% 4	1.5% 5	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
8 or 9	.5% 1	.9% 1	.6% 2	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
10 OR MORE	.5% 1	.0% 0	.3% 1	.0% 0	12.5% 1	4.5% 1	.0% 0	25.0% 1	4.5% 1	5.0% 1
Total	100.0% 213	100.0% 116	100.0% 329	100.0% 14	100.0% 8	100.0% 22	100.0% 16	100.0% 4	100.0% 22	100.0% 20

Table E-4

FULL-TIME EMPLOYED EXPERIENCED CHEMICAL ENGINEERS
by DEGREE and SEX
1995 ACS Starting Salary Survey

	Highest Degree									
	BS			MS			PHD			
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Total
1	38.3% 49	31.2% 24	35.6% 73	44.4% 8	71.4% 5	52.0% 13	68.0% 17	57.1% 4	65.6% 21	65.6% 21
2	32.0% 41	29.9% 23	31.2% 64	38.9% 7	14.3% 1	32.0% 8	16.0% 4	28.6% 2	18.8% 6	18.8% 6
3	18.8% 24	20.8% 16	19.5% 40	11.1% 2	14.3% 1	12.0% 3	16.0% 4	.0% 0	12.5% 4	12.5% 4
4	5.5% 7	9.1% 7	6.8% 14	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
5	1.6% 2	6.5% 5	3.4% 7	.0% 0	.0% 0	.0% 0	.0% 0	14.3% 1	3.1% 1	3.1% 1
6 or 7	.8% 1	2.6% 2	1.5% 3	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
8 or 9	2.3% 3	.0% 0	1.5% 3	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
10 OR MORE	.8% 1	.0% 0	.5% 1	5.6% 1	.0% 0	4.0% 1	.0% 0	.0% 0	.0% 0	.0% 0
Total	100.0% 128	100.0% 77	100.0% 205	100.0% 18	100.0% 7	100.0% 25	100.0% 25	100.0% 7	100.0% 32	100.0% 32

Table F-1

BS CHEMISTRY GRADUATES
by CITIZENSHIP, ETHNICITY, and DEGREE
1995 ACS Starting Salary Survey

BS	Race										Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other			
Citizenship US Native	84.6% 11	42.9% 30	52.6% 20	33.3% 52	85.4% 76	80.2% 77	97.3% 1918	67.4% 29			89.4% 2213
US Naturalized	7.7% 1	28.6% 20	34.2% 13	46.2% 72	2.2% 2	12.5% 12	1.4% 28	9.3% 4			6.1% 152
US Permanent Res Visa	.0% 0	17.1% 12	10.5% 4	12.8% 20	9.0% 8	6.3% 6	1.0% 19	14.0% 6			3.0% 75
Other visa	7.7% 1	11.4% 8	2.6% 1	7.7% 12	3.4% 3	1.0% 1	.3% 6	9.3% 4			1.5% 36
Total	100.0% 5% 13	100.0% 2.8% 70	100.0% 1.5% 38	100.0% 6.3% 156	100.0% 3.6% 89	100.0% 3.9% 96	100.0% 79.6% 1971	100.0% 1.7% 43			100.0% 100.0% 2476

(continued)

Table F-1 cont.

MS CHEMISTRY GRADUATES
by CITIZENSHIP, ETHNICITY, and DEGREE
1995 ACS Starting Salary Survey

MS	Race								Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Citizenship US Native	100.0% 2	.0% 0	.0% 0	5.9% 1	66.7% 4	33.3% 3	93.0% 186	33.3% 1	63.1% 197
US Naturalized	.0% 0	1.5% 1	.0% 0	11.8% 2	.0% 0	11.1% 1	3.5% 7	.0% 0	3.5% 11
US Permanent Res Visa	.0% 0	32.3% 21	20.0% 2	23.5% 4	.0% 0	11.1% 1	1.5% 3	33.3% 1	10.3% 32
Other visa	.0% 0	66.2% 43	80.0% 8	58.8% 10	33.3% 2	44.4% 4	2.0% 4	33.3% 1	23.1% 72
Total	100.0% .6% 2	100.0% 20.8% 65	100.0% 3.2% 10	100.0% 5.4% 17	100.0% 1.9% 6	100.0% 2.9% 9	100.0% 64.1% 200	100.0% 1.0% 3	100.0% 100.0% 312

Table F-1 cont.

PHD CHEMISTRY GRADUATES
by CITIZENSHIP, ETHNICITY, and DEGREE
1995 ACS Starting Salary Survey

PHD	Race									Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other		
Citizenship US Native	.0% 0	1.4% 1	.0% 0	.0% 0	60.0% 3	66.7% 8	88.5% 193	66.7% 2	60.5% 207	
US Naturalized	.0% 0	1.4% 1	.0% 0	25.0% 5	20.0% 1	8.3% 1	2.3% 5	.0% 0	3.8% 13	
US Permanent Res Visa	.0% 0	63.5% 47	10.0% 1	20.0% 4	20.0% 1	16.7% 2	4.1% 9	.0% 0	18.7% 64	
Other visa	.0% 0	33.8% 25	90.0% 9	55.0% 11	.0% 0	8.3% 1	5.0% 11	33.3% 1	17.0% 58	
Total	.0% 0	100.0% 21.6% 74	100.0% 2.9% 10	100.0% 5.8% 20	100.0% 1.5% 5	100.0% 3.5% 12	100.0% 63.7% 218	100.0% 100.9% 3	100.0% 100.0% 342	

Table F-2

CHEMISTRY GRADUATES
by CITIZENSHIP, SEX, and DEGREE
1995 ACS Starting Salary Survey

	BS			MS			PHD		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Citizenship US Native	91.0% 1207	87.7% 1018	89.4% 2225	71.1% 123	53.6% 75	63.3% 198	59.6% 136	62.9% 73	60.8% 209
US Naturalized	5.3% 70	7.1% 82	6.1% 152	2.9% 5	4.3% 6	3.5% 11	3.1% 7	5.2% 6	3.8% 13
US Permanent Res Visa	2.6% 34	3.5% 41	3.0% 75	4.0% 7	17.9% 25	10.2% 32	18.4% 42	19.0% 22	18.6% 64
Other visa	1.2% 16	1.7% 20	1.4% 36	22.0% 38	24.3% 34	23.0% 72	18.9% 43	12.9% 15	16.9% 58
Total	100.0% 1327	100.0% 1161	100.0% 2488	100.0% 173	100.0% 140	100.0% 313	100.0% 228	100.0% 116	100.0% 344

Table F-3

**MINORITY CHEMISTRY GRADUATES
by MINORITY CLASSIFICATION, SEX, AND DEGREE
1995 ACS Starting Salary Survey**

MINORITY CLASSIFICATION	BS			MS			PHD		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Amer Indian	2.5% 6	2.6% 7	2.6% 13	2.0% 1	1.6% 1	1.8% 2	.0% 0	.0% 0	.0% 0
Chinese	16.3% 39	11.5% 31	13.8% 70	46.9% 23	66.7% 42	58.0% 65	60.2% 53	58.3% 21	59.7% 74
Subcont Indian	7.9% 19	7.4% 20	7.7% 39	8.2% 4	9.5% 6	8.9% 10	9.1% 8	5.6% 2	8.1% 10
Other Asian	30.1% 72	31.2% 84	30.7% 156	20.4% 10	11.1% 7	15.2% 17	15.9% 14	16.7% 6	16.1% 20
Black	16.3% 39	18.6% 50	17.5% 89	6.1% 3	4.8% 3	5.4% 6	4.5% 4	2.8% 1	4.0% 5
Hisp	17.6% 42	20.8% 56	19.3% 98	10.2% 5	6.3% 4	8.0% 9	9.1% 8	11.1% 4	9.7% 12
Other	9.2% 22	7.8% 21	8.5% 43	6.1% 3	.0% 0	2.7% 3	1.1% 1	5.6% 2	2.4% 3
Total	100.0% 239	100.0% 269	100.0% 508	100.0% 49	100.0% 63	100.0% 112	100.0% 88	100.0% 36	100.0% 124

Table F-4

**BS CHEMICAL ENGINEERING GRADUATES
by CITIZENSHIP, ETHNICITY, and DEGREE
1995 ACS Starting Salary Survey**

BS	Race								Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Citizenship US Native	100.0% 5	26.8% 11	37.9% 11	35.3% 18	86.4% 38	82.1% 23	97.7% 945	53.8% 7	89.8% 1058
US Naturalized	.0% 0	48.8% 20	34.5% 10	56.9% 29	4.5% 2	7.1% 2	1.1% 11	7.7% 1	6.4% 75
US Permanent Res Visa	.0% 0	4.9% 2	6.9% 2	5.9% 3	4.5% 2	7.1% 2	1.0% 10	15.4% 2	2.0% 23
Other visa	.0% 0	19.5% 8	20.7% 6	2.0% 1	4.5% 2	3.6% 1	.1% 1	23.1% 3	1.9% 22
Total	100.0% .4% 5	100.0% 3.5% 41	100.0% 2.5% 29	100.0% 4.3% 51	100.0% 3.7% 44	100.0% 2.4% 28	100.0% 82.1% 967	100.0% 1.1% 13	100.0% 100.0% 1178

(continued)

Table F-4 cont.

MS CHEMICAL ENGINEERING GRADUATES
by CITIZENSHIP, ETHNICITY, and DEGREE
1995 ACS Starting Salary Survey

MS	Race									Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other		
Citizenship US Native	100.0% 2	.0% 0	8.3% 1	18.2% 2	100.0% 3	50.0% 1	88.6% 70	33.3% 1	58.4% 80	
US Naturalized	.0% 0	4.0% 1	8.3% 1	.0% 0	.0% 0	.0% 0	2.5% 2	66.7% 2	4.4% 6	
US Permanent Res Visa	.0% 0	16.0% 4	8.3% 1	9.1% 1	.0% 0	50.0% 1	.0% 0	.0% 0	5.1% 7	
Other visa	.0% 0	80.0% 20	75.0% 9	72.7% 8	.0% 0	.0% 0	8.9% 7	.0% 0	32.1% 44	
Total	100.0% 1.5% 2	100.0% 18.2% 25	100.0% 8.8% 12	100.0% 8.0% 11	100.0% 2.2% 3	100.0% 1.5% 2	100.0% 57.7% 79	100.0% 2.2% 3	100.0% 100.0% 137	

(continued)

Table F-4 cont.

PHD CHEMICAL ENGINEERING GRADUATES
by CITIZENSHIP, ETHNICITY, and DEGREE
1995 ACS Starting Salary Survey

PHD	Race										Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other			
Citizenship US Native	100.0% 1	7.1% 1	.0% 0	.0% 0	.0% 0	.0% 0	81.3% 39	.0% 0	49.4% 41		
US Naturalized	.0% 0	7.1% 1	.0% 0	40.0% 2	.0% 0	.0% 0	4.2% 2	.0% 0	6.0% 5		
US Permanent Res Visa	.0% 0	57.1% 8	18.2% 2	20.0% 1	.0% 0	.0% 0	10.4% 5	.0% 0	19.3% 16		
Other visa	.0% 0	28.6% 4	81.8% 9	40.0% 2	.0% 0	100.0% 2	4.2% 2	100.0% 2	25.3% 21		
Total	100.0% 1.2% 1	100.0% 16.9% 14	100.0% 13.3% 11	100.0% 6.0% 5	.0% 0	100.0% 2.4% 2	100.0% 57.8% 48	100.0% 2.4% 2	100.0% 100.0% 83		

Table F-5

CHEMICAL ENGINEERING GRADUATES
by CITIZENSHIP, SEX, and DEGREE
1995 ACS Starting Salary Survey

	BS			MS			PHD		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Citizenship US Native	90.4% 688	88.9% 376	89.9% 1064	53.1% 51	68.2% 30	57.9% 81	44.9% 31	66.7% 10	48.8% 41
US Naturalized	6.0% 46	6.9% 29	6.3% 75	6.3% 6	2.3% 1	5.0% 7	2.9% 2	20.0% 3	6.0% 5
US Permanent Res Visa	1.6% 12	2.6% 11	1.9% 23	5.2% 5	4.5% 2	5.0% 7	21.7% 15	6.7% 1	19.0% 16
Other visa	2.0% 15	1.7% 7	1.9% 22	35.4% 34	25.0% 11	32.1% 45	30.4% 21	6.7% 1	26.2% 22
Total	100.0% 761	100.0% 423	100.0% 1184	100.0% 96	100.0% 44	100.0% 140	100.0% 69	100.0% 15	100.0% 84

Table F-6

**MINORITY CHEMICAL ENGINEERING GRADUATES
by MINORITY CLASSIFICATION, SEX, AND DEGREE
1995 ACS Starting Salary Survey**

	BS			MS			PHD		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Race									
Amer Indian	2.6% 3	2.1% 2	2.4% 5	.0% 0	14.3% 2	3.4% 2	3.0% 1	.0% 0	2.9% 1
Chinese	22.2% 26	16.0% 15	19.4% 41	43.2% 19	42.9% 6	43.1% 25	42.4% 14	.0% 0	40.0% 14
Subcont Indian	18.8% 22	7.4% 7	13.7% 29	25.0% 11	7.1% 1	20.7% 12	33.3% 11	.0% 0	31.4% 11
Other Asian	23.1% 27	25.5% 24	24.2% 51	18.2% 8	21.4% 3	19.0% 11	12.1% 4	50.0% 1	14.3% 5
Black	12.0% 14	31.9% 30	20.9% 44	2.3% 1	14.3% 2	5.2% 3	.0% 0	.0% 0	.0% 0
Hisp	14.5% 17	11.7% 11	13.3% 28	4.5% 2	.0% 0	3.4% 2	6.1% 2	.0% 0	5.7% 2
Other	6.8% 8	5.3% 5	6.2% 13	6.8% 3	.0% 0	5.2% 3	3.0% 1	50.0% 1	5.7% 2
Total	100.0% 117	100.0% 94	100.0% 211	100.0% 44	100.0% 14	100.0% 58	100.0% 33	100.0% 2	100.0% 35



American Chemical Society

1155 SIXTEENTH STREET, N.W.
WASHINGTON, D.C. 20036
PHONE (202) 872-4534

JOHN K CRUM
Executive Director

Summer, 1995

Dear Colleague:

Each year, the American Chemical Society conducts a mail survey of persons who have recently earned degrees in chemistry or chemical engineering. The published results, which include information about salaries and employment, are useful to the profession, and especially to graduates beginning their careers.

I urge you, as a service to your colleagues and profession, to respond to this year's questionnaire. The information is *confidential*. The information you provide will be combined with returns from other graduates so that only aggregate data will be available. To ensure confidentiality, your name and address will not be coded with the information you provide.

Please complete this questionnaire and return it promptly. For your convenience, I have enclosed a self-addressed, postage-paid envelope. The results of the survey will be published in *Chemical & Engineering News'* career issue this October and in a more extensive report later in the year.

Thank you for your assistance with this survey. I extend my best wishes for every success in your professional pursuits.

Sincerely,


John K Crum

JKC/cam

Enclosure

AMERICAN CHEMICAL SOCIETY

Survey of Starting Salaries and Employment Status of 1995 Chemistry and Chemical Engineering Graduates

1. Highest degree earned:

- Bachelor's 1
 Master's 2
 Doctorate 3 1

2. Field of highest degree:

- Chemical engineering 01
 Biochemical engineering..... 02
 Biochemistry..... 03
 General chemistry 04
 Analytical chemistry 05
 Inorganic chemistry..... 06
 Organic chemistry 07
 Physical chemistry 08
 Polymer chemistry 09
 Other chemistry..... 10
 Other (please specify) _____ 11 2-3

3. Please describe the school that granted your degree:

- a. Public 1
 Private 2 4

b. Total number of students:

- Less than 1,500 1
 1,500 to 4,999 2
 5,000 to 9,999 3
 10,000 to 19,999 4
 20,000 or more 5 5

c. The highest degree offered by your department is:

- BS 1
 MS 2
 PhD 3 6

d. Location of school. Please give first three digits of zip code:

_____ 7-9

e. Is the school an historically or predominantly black institution?

- Yes 1
 No 2 10

f. Is the school a traditionally women's institution?

- Yes 1
 No 2 11

4. In your chemistry classes, did you get a chance to:
a. Work in teams?

- Yes 1
 No 2 12

b. Work on independent research projects?

- Yes 1
 No 2 13

5. Did you participate in a chemistry or chemical engineering cooperative education program while in college?

- Yes 1
 No 2 14

6. Grade point average: [Use A=4.00; B=3.00; C=2.00]

- In your major _____ 15-18
 Overall _____ 19-22

7. Will you pursue advanced studies in the fall of 1995?

- Yes, full-time 1
 Yes, part-time 2
 No 3 23

a. If yes, field of further studies:

- Chemistry..... 01
 Other physical sci, computer science, math . 02
 Chemical engineering or biochemical eng.... 03
 Other engineering 04
 Biochemistry 05
 Life science 06
 Medicine 07
 Dentistry..... 08
 Pharmacy, pharmacology 09
 Business management 10
 Education..... 11
 Law 12
 Other 13 24-25

8. Your age at last birthday? _____ years old 26-27
9. Your sex?

- Male 1
 Female 2 28

10. Citizenship or visa status:

- U.S. native 1
 U.S. naturalized 2
 U.S. permanent resident visa 3
 Other visa 4 29

IF HIGHEST DEGREE EARNED WAS A MASTER'S OR DOCTORATE, PLEASE SKIP TO QUESTION 7.

11. What is your racial or ethnic group?

- American Indian or Alaskan Native 1
- Chinese 2
- Subcontinental Indian 3
- Other Asian or Pacific Islander 4
- African American/Black (not of Hispanic origin) 5
- Hispanic 6
- White (not of Hispanic origin) 7
- Other race or ethnic group 8 30

12. Current employment status:

- Accepted or continuing full-time employment (excluding summer employment) 1
- Accepted a graduate assistantship, fellowship, or postdoctoral fellowship 2
- Part-time employment 3
- Temporary/summer employment 4
- Not employed 5 31

a. If not continuing full-time employment, are you:

- seeking* full-time, year-round employment 1
- not seeking* full-time, year-round employment 2 32

IF YOU CHECKED BOX 3, 4, OR 5 IN QUESTION 12, PLEASE STOP HERE AND RETURN THE QUESTIONNAIRE IN THE ENVELOPE PROVIDED.

13. Your base annual salary from principal job:

\$ _____ per year 33-38

IF YOU HOLD AN ASSISTANTSHIP OR FELLOWSHIP, PLEASE STOP HERE AND RETURN THE QUESTIONNAIRE IN THE ENVELOPE PROVIDED.

14. How many firm offers of employment did you receive in a field of chemistry or chemical engineering?

Specify number _____ 39-41

15. Professional or technical work experience prior to graduation:

- Less than 12 months (or none) 1
- 12 to 36 months 2
- More than 36 months 3 42

16. Check the one specialty most related to your job:

- Chemical engineering 1
- Chemistry (including biochemistry) 2
- Other 3 43

17. Check the one category that best describes your employer:

- Private industry 1
- College or university 2
- High school or other school 3
- Federal government (civilian) 4
- Military 5
- State or local government 6
- Hospital or independent laboratory 7
- Other 8 44

18. If you are employed in private industry, check the one category that best describes the type of industry:

- Non-manufacturing 01
- Manufacturing company primarily involved in:
 - Aerospace 02
 - Basic chemicals 03
 - Specialty chemicals 04
 - Agricultural chemicals 05
 - Electronics 06
 - Petroleum/natural gas 07
 - Pharmaceuticals/personal care 08
 - Plastics 09
 - Other manufactures 10 45-46

19. Check the ONE work function that best describes your job:

- Teaching 1
- Management or Administration 2
- Basic research 3
- Applied research, Development, or Design 4
- Production/Quality control 5
- Other (specify) _____ 6 47

20. Is your job classified as a:

- Chemical or engineering technician 1
- Scientist or engineer 2
- Manager or administrator 3
- Other (specify) _____ 4 48

21. Employer's approximate number of employees (total for the whole organization):

- Less than 500 1
- 500 to 2,499 2
- 2,500 to 9,999 3
- 10,000 to 24,999 4
- 25,000 or more 5 49

22. Geographic location of employment: Please give *first three* digits of zip code:

Comments:

**THANK YOU FOR YOUR PARTICIPATION.
PLEASE RETURN THIS QUESTIONNAIRE TO:**

**American Chemical Society
Department of Career Services
1155 16th Street, NW
Washington, DC 20036**

ACS CAREER SERVICES PUBLICATIONS

Salaries: The Society annually surveys the ACS membership, gathering detailed information on member chemists and chemical engineers. The reports based on this survey contain statistical tables describing the respondents' employment status, employer, work function and specialty, salaries, and demographic characteristics. Reports are available for each year from 1973 through the current year. For 1987, four separate reports are available: 1987 Salaries of Non-Academic Chemists, 1987 Salaries of Non-Academic Chemical Engineers, 1987 Salaries of Academic Chemists, and 1987 Employment Status and Demographic Characteristics of ACS Members.

Starting Salaries: ACS also surveys new graduates in chemistry and chemical engineering each year, and publishes reports detailing the graduates' employment status, post-graduation plans, starting salaries and other employment and demographic characteristics. Reports are available for each year from 1975.

Women Chemists: Every five years, the Society produces a supplemental report on the economic status of women in the ACS. Reports are available for 1975, 1980, 1985, 1990, and a new edition for 1995 will be available in spring 1996.

For prices and ordering information, please call or write:

ACS Membership Service Center
4000 Olson Memorial Highway
PO Box 9389
Minneapolis, MN 55440-9389
Phone: 800/451-9190 pr 612/520-6798
Fax: 612/520-6706

CAREER SERVICE PUBLICATIONS

Workforce Reports which are published three times a year, provide analyses of workforce issues. Each issue is devoted to a single topic, for example BS chemists or women chemists. Reports are available from September 1990 through the present.

Department of Career Services Bulletins which are published several times a year report current data on degrees, employment, and supply and demand.

Current Trends provides information on technology, business, economic, R&D, and hiring trends in the corporate, government, and academic worlds. Updated every five years.

Professional Employment Guidelines (PEG) addresses, for both employer and employee, good employment practices as the basis of sound professional relations. Topics include: terms of employment, employer environment; professional development; termination conditions; definition of multiple terminations; investigation of unprofessional conduct; patent rights for inventors; continuing education; and pension privileges.

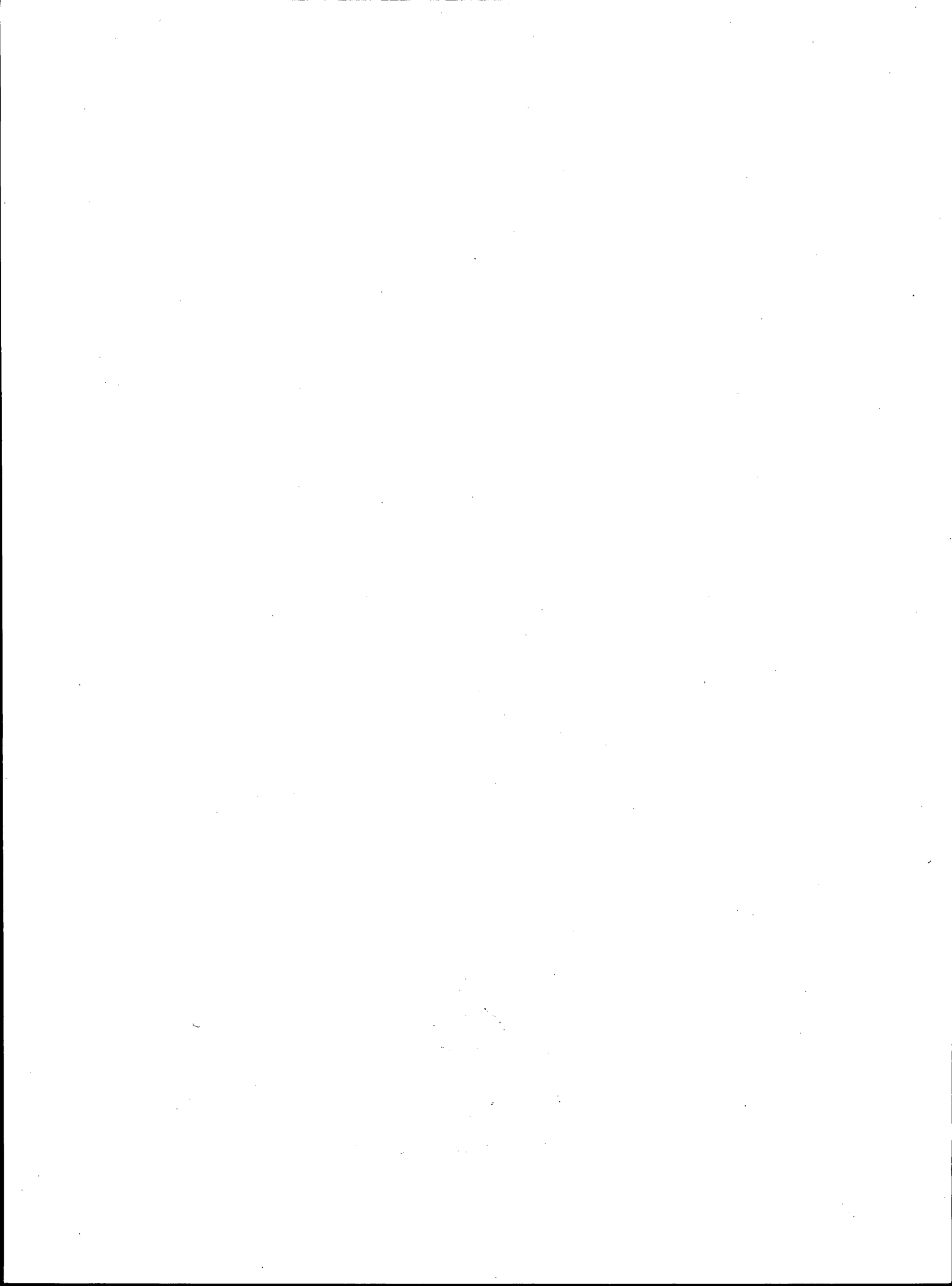
Academic Professional Guidelines are extensions of the broader ACS Professional Employment Guidelines (PEG). Outlining reasonable and ethical professional conduct for faculty, students, associates, and administrators, the Guidelines are intended to enhance the relationships between these constituencies; and, to provide assistance on special issues that are of concern to chemical scientists in the academic environment.

ACS Career, Employment and Professional Resources: A Catalog of Publications, Programs & Services. This brochure lists all ACS career resources for high school and college students exploring career options; professionals seeking employment in chemistry and allied fields; and individuals facing the challenges of career development, career changes, and retirement.

ClassiFACTS. This unique job search provides weekly job ads from 40+ major metropolitan newspapers. Request job postings by region and job titles. Especially good for BS/MS chemists with five years or less experience. Call 1-800-678-2436 for the subsidized subscription rate for ACS members.

C&EN Situation Wanted Ads. Employed ACS members and student affiliates may place an ad in C&EN at \$6.60 a line per insertion, no minimum charge. Unemployed ACS members, student affiliates, and retired members may place free situations wanted ads; certain restrictions apply.

Employer Mailing List is the mailing list, arranged by state, used to solicit employers for ACS employment services. It is arranged by state, and can be purchased for \$10. Use of this mailing list is restricted to personal use only.





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Washington, D.C.