STARTING $ALARIE$

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 AND CHEMICAL ENGINEERS

1992

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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 Distribution Office, ACS

CONTENTS

ACKNOWLEDGMENTS

Each year, at the direction of its Joint Board-Council Committee on Economic Status, 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 1992 Starting Salary Survey. A summary of the survey findings was published in the October 19 issue of *Chemical & Engineering News*.

Joan Burrelli and Karen Dyson of the Office of Professional Services conducted this year's survey and prepared this report. Dr. Burrelli wrote the summary and comment on the following pages. Special thanks go to the more than 4,000 graduates who took the time to respond to this year's survey.

Mary L. Funke, Manager
Office of Professional Services

SUMMARY OF FINDINGS

SALARIES

This year's starting salaries indicate an improving economic outlook for new BS chemistry graduates. The median salary for inexperienced BS chemists increased to $24,000 this year, up from $23,000 for the previous three years. The mean starting salary was $24,764 this year, almost 4% higher than last year's $23,858. After adjusting for inflation, mean salaries increased 1% this year.

Starting salaries for MS and PhD chemists increased less than those for BS chemists this year. The mean starting salary for MS chemists rose 1% this year to $31,626. The mean starting salary for PhD chemists rose 3.5% this year to $43,499. Inflation adjusted salaries for MS chemists decreased 2%; those for PhD chemists were little changed.

Chemical engineering graduates at all degree levels continue to earn higher salaries than those of chemists and the gap is getting larger over time. Starting salaries for new chemical engineering graduates continued to increase this year. The mean starting salary for inexperienced BS chemical engineers was $38,235 in 1992, up 4% from the $36,632 last year. Mean starting salaries for inexperienced MS chemical engineers rose 1% to $40,162, and for inexperienced PhD chemical engineers, they rose 4% to $52,368.

Table 1 shows average starting salaries paid to inexperienced chemistry graduates for 1991 and 1992, and gives additional information concerning the variation among individual salaries within each group. Table 2 presents corresponding information for chemical engineering graduates.

For inexperienced chemists (those with less than 12 months of experience), 1992 mean starting salaries were:

$24,764	for the	BS,	up	3.8%,	or in constant dollars	up 0.7%
$31,626	for the	MS,	up	1.3%,	or in constant dollars	down 1.7%
$43,499	for the	PhD,	up	3.5%,	or in constant dollars	up 0.4%

Among chemical engineers, the 1992 mean starting salaries were:

$38,235	for the	BS,	up	4.4%,	or in constant dollars	up 1.2%
$40,162	for the	MS,	up	1.2%,	or in constant dollars	down 1.9%
$52,368	for the	PhD,	up	3.7%	or in constant dollars	up 0.6%

The Consumer Price Index rose 3.1% from August 1991 to August 1992. The trends in median starting salaries from 1982 to the present for inexperienced chemists and chemical engineers are shown in Figures 1 and 2.

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 $50,600 for those employed in industry and $28,000 for those employed in colleges or universities (see Table A-6). Similarly, salaries are highest for chemists in management ($28,600 for new BS graduates) and lowest in teaching ($22,800 for new BS graduates) (see Table A-11).

Table 1

STARTING YEARLY SALARIES OF INEXPERIENCED FULL-TIME EMPLOYED CHEMISTRY GRADUATES

by Degree: 1991 and 1992

Salaries	DEGREE LEVEL					
	Bachelor's		Master's		Doctorate	
	1991	1992	1991	1992	1991	1992
90th Percentile	$31,500	$32,000	$40,000	$40,000	$51,600	$55,000
75th Percentile	28,000	28,100	36,000	36,600	49,000	52,000
50th Percentile	23,000	24,000	32,000	31,500	46,000	47,500
25th Percentile	20,000	21,000	27,500	27,800	34,400	34,200
10th Percentile	17,400	18,100	21,100	22,000	26,000	27,000
Mean	23,858	24,764	31,218	31,626	42,008	43,499
Count	354	371	54	52	146	124
Standard Deviation	5,156	5,353	6,946	6,755	9,822	10,947

Table 2

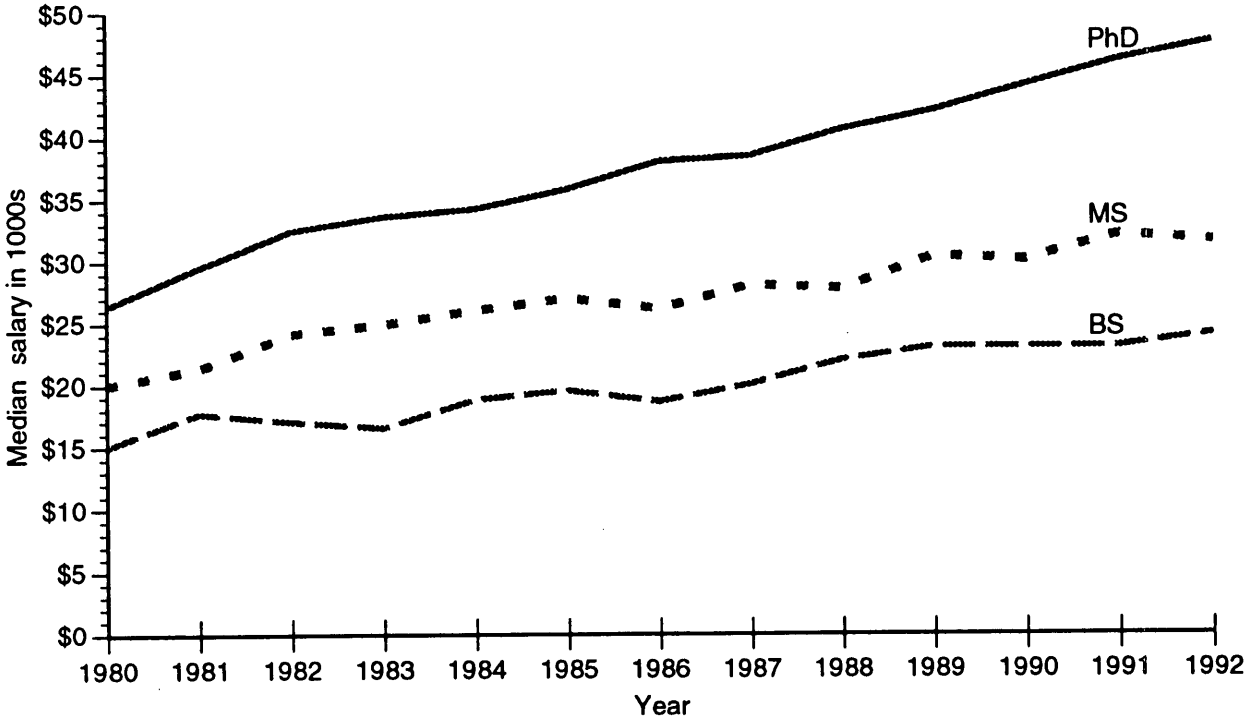
STARTING YEARLY SALARIES
OF INEXPERIENCED FULL-TIME EMPLOYED
CHEMICAL ENGINEERING GRADUATES

by Degree: 1991 and 1992

Salaries	DEGREE LEVEL					
	Bachelor's		Master's		Doctorate	
	1991	1992	1991	1992	1991	1992
90th Percentile	$40,000	$41,900	$44,000	$44,800	$56,000	$58,000
75th Percentile	38,900	40,500	41,000	43,500	54,000	56,400
50th Percentile	37,500	40,000	40,200	41,500	52,000	54,000
25th Percentile	36,000	37,900	37,500	39,700	48,000	52,000
10th Percentile	32,000	31,300	35,100	30,000	44,200	40,000
Mean	36,632	38,235	39,695	40,162	50,497	52,368
Count	318	267	26	22	64	47
Standard Deviation	4,161	4,299	5,539	4,896	6,298	7,268

Figure 1

Median Starting Salaries of Inexperienced Chemists (in current dollars)



Source: ACS Starting Salary Surveys

Median Starting Salaries of Inexperienced Chemists* (in current dollars)

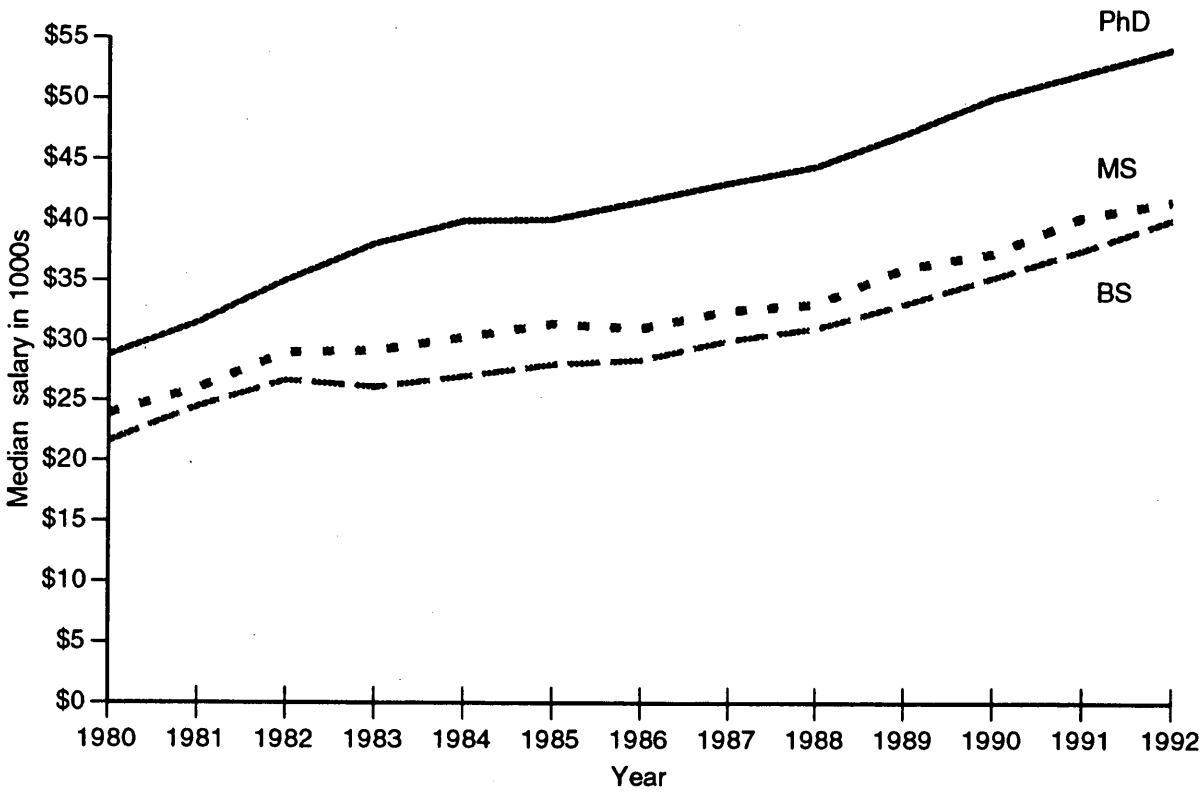
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
BS	15.0	17.7	17.0	16.5	18.8	19.5	18.6	20.0	21.9	23.0	23.0	23.0	24.0
MS	20.0	21.3	24.1	24.9	26.0	27.0	26.1	28.0	27.7	30.3	30.0	32.0	31.5
PhD	26.4	29.5	32.4	33.6	34.2	35.8	38.0	38.4	40.5	42.0	44.0	46.0	47.5

*Base annual salary in thousands of dollars

Source: ACS Starting Salary Surveys

Figure 2

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



Source: ACS Starting Salary Surveys

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

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
BS	21.6	24.5	26.7	26.1	27.0	28.0	28.4	30.0	31.0	33.0	35.2	37.5	40.0
MS	23.9	26.0	29.0	29.2	30.3	31.4	31.0	32.5	33.0	36.0	37.2	40.2	41.5
PhD	28.8	31.5	35.0	38.0	39.9	40.0	41.5	43.0	44.4	47.0	50.0	52.0	54.0

*Base annual salary in thousands of dollars

Source: ACS Starting Salary Surveys

Larger employers generally pay more than smaller ones. BS chemists and chemical engineers employed in larger firms (more than 24,000 employees) make $6,000-$8,000 more, on average, than those employed in smaller firms (less than 500 employees) (see Tables A-10 and A-20). Chemical engineers are much more likely than chemists to be employed in large firms. Forty-one percent of new chemical engineers and only 20% of new chemists are employed in firms with more than 24,000 employees. Conversely, more than a third (37%) of chemists, but only 9% of chemical engineers, are employed in firms with less than 500 employees.

Salaries for new BS chemistry graduates are highest in the Middle Atlantic region ($25,500) and lowest in the West North Central region ($21,600). Median salaries for new BS chemical engineers vary from a high of $40,500 in the West South Central region to a low of $37,000 in the South Atlantic region. (See page 16 for a list of the states included in each geographic region.)

Generally speaking, bachelor's chemists and chemical engineers receive higher starting salaries if they have participated in co-op programs, or if they had a high grade point average in their major.

POST-GRADUATION EMPLOYMENT STATUS

Unemployment rates for bachelor's chemistry and chemical engineering graduates decreased this year. The recent history for unemployment rates of bachelor's graduates is* :

	1992	1991	1990	1989	1988	1987	1986
Chemical Engineering	8%	9%	6%	5%	8%	16%	21%
Chemistry	10%	14%	13%	10%	11%	13%	13%

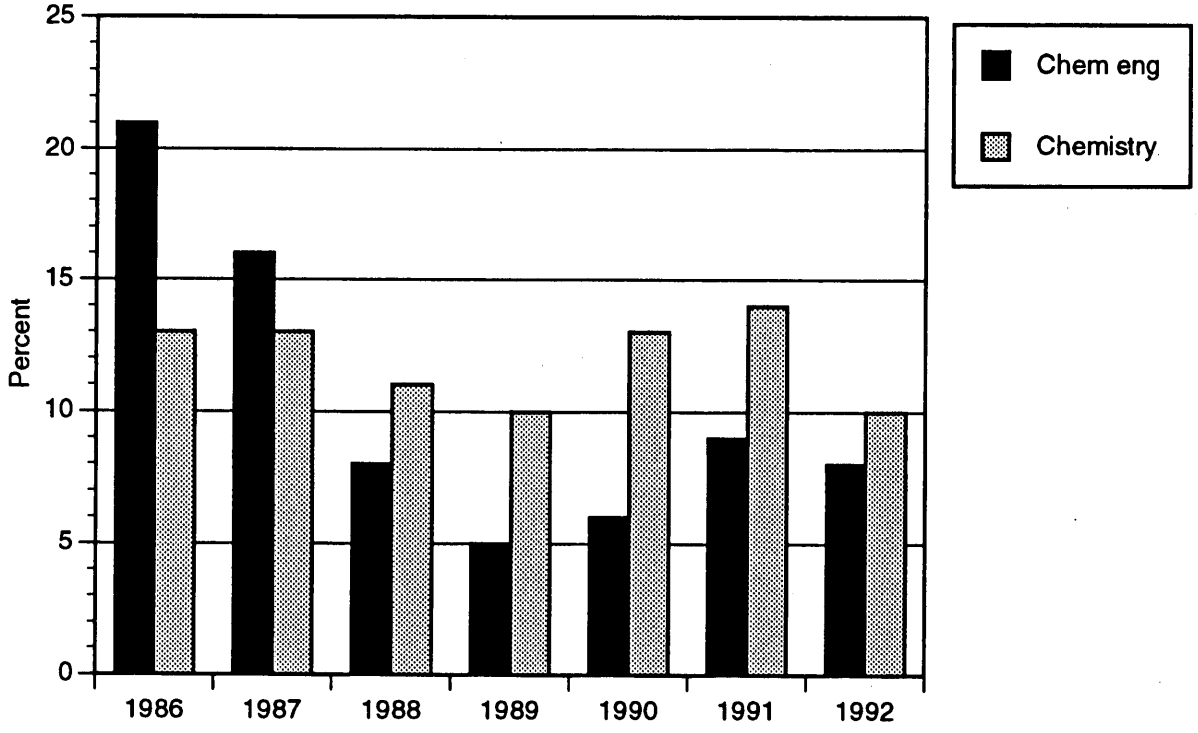
As Figure 3 shows, unemployment for both chemistry and chemical engineering graduates was relatively high in the mid-1980s, and relatively low in 1988 and 1989, especially for chemical engineering graduates, and has been somewhat higher the past two years.

Chemistry graduates are finding it a little easier this year than last to get jobs in chemistry, indicating a coming end to the recession. The proportion of new bachelor's chemistry graduates who found employment in chemistry or chemical engineering increased this year: 65% found employment in chemistry or chemical engineering this year, compared to last year's 62%. This year, 79% of bachelor's chemical engineering graduates in the labor force found employment in chemistry and chemical engineering--the same figure as last year's.

* Note that the calculation for the unemployment rate excludes those persons who are not seeking employment.

Figure 3

Unemployment Rates of Recent Bachelor's Graduates



Source: ACS Starting Salary Surveys

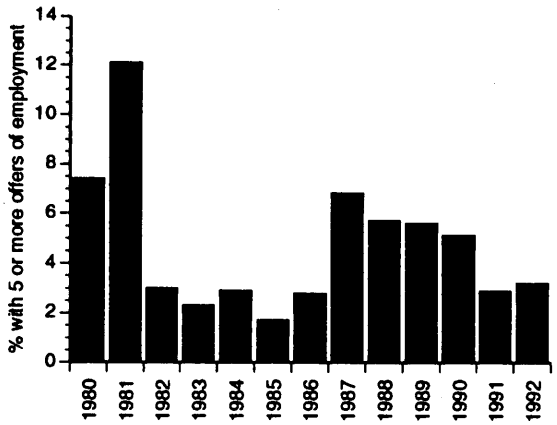
Table 3

POST GRADUATION STATUS OF CHEMISTRY AND CHEMICAL ENGINEERING GRADUATES: FALL 1992

Major and Employment Status	Bachelor's	Master's	Doctorate
CHEMISTRY			
Full-time employed:			
In chemistry or chemical engineering	32.3%	44.7%	46.3%
Outside chemistry or chemical engineering	8.2%	7.3%	2.7%
Grad. asst./postdoctoral or other fellowship	42.3%	40.6%	45.3%
Unemployed and seeking full-time employment	8.9%	5.8%	4.7%
Unemployed and not seeking full-time employment	8.3%	1.5%	1.0%
Total	100.0	100.0	100.0
Number of responses	2,071	342	512
CHEMICAL ENGINEERING			
Full-time employed:			
In chemistry or chemical engineering	62.4%	45.0%	73.8%
Outside chemistry or chemical engineering	8.6%	6.7%	5.6%
Grad. asst./postdoctoral or other fellowship	18.3%	42.5%	15.0%
Unemployed and seeking full-time employment	8.1%	5.0%	5.6%
Unemployed and not seeking full-time employment	2.6%	.8%	----
Total	100.0	100.0	100.0
Number of responses	694	120	107

NUMBER OF OFFERS

The number of firm offers of employment was up this year for BS chemistry graduates. The number of offers generally follows the economy, as can be seen from the following:



New PhD chemistry graduates had more offers of employment, on average, than master's or bachelor's graduates, and new chemical engineering graduates had more offers of employment than chemistry graduates. Experience made no difference in average number of offers of employment: both inexperienced and experienced BS chemistry graduates had, on average, two offers of employment. Among new PhD chemists, those whose field was biochemistry, analytical, inorganic, or polymer chemistry had more offers, on average, than those in other fields.

POSTDOCTORAL FELLOWSHIPS

The fraction of new PhDs who accept postdoctoral fellowships is another 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, this measure of demand indicates a less favorable employment situation for PhD chemistry graduates than was the case last year: 45% of new chemistry doctorates accepted postdoctoral fellowships this year compared with 37% last year (Table 3). The fraction of new chemical engineering doctorates taking postdocs also increased: 15% of new chemical engineering doctorates accepted postdoctoral fellowships this year compared with 8% in 1991.

PLANS FOR ADVANCED STUDY

Traditionally, between 50% and 55% of bachelor's chemistry graduates plan full-time studies (in any field) and another roughly 10% plan part-time studies. Bachelor's chemical engineering graduates are much less likely than chemistry graduates to plan further studies. Only 22% planned full-time studies this year. A summary of the plans of the 1992 graduates appears in Tables 4 and 5.

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). Of those bachelor's chemistry graduates who planned further studies in another discipline in 1992, slightly more than half (51%) planned to go into medicine, 12% planned to go into dentistry or pharmacy, 3% planned to study business, 15%

Figure 4

Post-graduation Plans of 1992 BS Chemistry Graduates

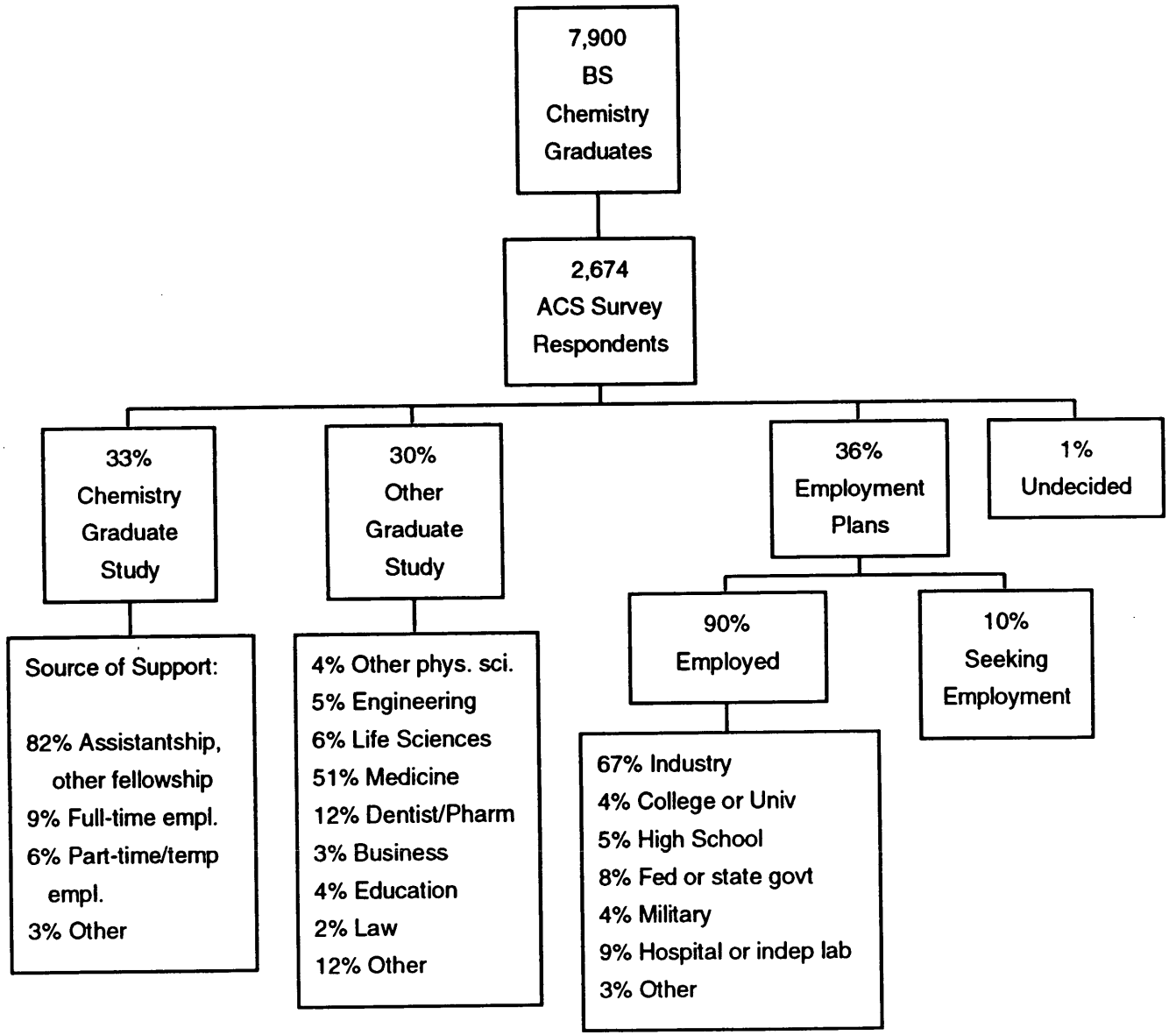


Table 4

PLANS FOR FURTHER STUDY OF BS CHEMISTRY AND CHEMICAL ENGINEERING GRADUATES: FALL 1992

Plans	Chemistry	Chemical Engineering
Further studies	62.7%	30.1%
Full-time	(55.2%)	(22.4%)
Part-time	(7.5%)	(7.7%)
No plans for further studies	37.3%	69.8%
Total	100.0	100.0
Number of responses	2,667	749

Table 5

FIELDS OF STUDY OF BS CHEMISTRY AND CHEMICAL ENGINEERING GRADUATES WHO PLAN FURTHER STUDIES FALL 1992

Plans	Chemistry	Chemical Engineering
FULL-TIME STUDY		
Chemistry or biochemistry	54.6%	2.4%
Chemical or biochemical engineering	1.2%	73.8%
Other engineering	.8%	6.0%
Medicine, dentistry, or pharmacy	32.4%	11.3%
Business or management	.5%	----%
All others	10.5%	6.5%
Total	100.0	100.0
Number of responses	1,455	168
PART-TIME STUDY		
Chemistry or biochemistry	45.4%	3.4%
Chemical or biochemical engineering	4.0%	39.7%
Other engineering	2.0%	12.1%
Physical science	6.1%	1.7%
Life science	8.1%	------
Medicine, dentistry, or pharmacy	6.0%	1.7%
Business or management	9.6%	31.0%
Education	6.1%	1.7%
All others	12.6%	8.7%
Total	100.0	100.0
Number of responses	198	58

planned to study other natural sciences and engineering and 18% 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, 67% are employed in industry, and about 10% each are employed in academia, in government, and in hospitals or independent labs.

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, however, both graduates who completed the ACS approved programs and those who did not complete the approved program, earned, on average, $25,000 per year in industry.

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-nine percent of graduates of approved programs planned full-time studies compared with 42% of graduates of non-approved programs (Table B-4b). Of the bachelor's chemistry graduates who plan full-time studies, most (69%) of those from approved programs plan to study chemistry, compared with only 24% of those from non-approved programs. Conversely, 40% of those from non-approved programs plan to study medicine compared with only 12% of those from approved programs (Table C-5).

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 6% this year, compared to 13% for graduates of non-approved programs (Table B-4a).* Among the full-time employed bachelor's chemistry graduates, 82% of graduates of ACS approved programs, but only 78% of graduates of non-approved programs, were employed in chemistry or chemical engineering.

EMPLOYMENT OF BACHELOR'S CHEMISTS AS TECHNICIANS

About 36% 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 $23,800 whereas the median salary of those not employed as technicians was $26,400.

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% and Hispanics were .7% of bachelor's chemistry graduates. This year, African-Americans are 3% and Hispanics are 2.4% of bachelor's chemistry graduates. Native Americans are a very small proportion (1% or less) of new graduates in chemistry and chemical engineering at all degree levels.

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* Note that the calculation for the unemployment rate excludes those persons who are not seeking employment.

The proportion of new chemistry graduates who are Asian has trebled since 1973. In that year, Asians were 3% of bachelor's, 9% of master's, and 9% of PhD graduates. This year, Asians are 8% of bachelor's, 28% of master's, and 29% of PhD graduates. More than three-quarters (79%) of bachelor's chemistry graduates of Asian descent are U.S. citizens (either native or naturalized). Only 6% are here on temporary visas. The reverse is true for PhDs. Only 8% of doctoral chemistry graduates of Asian decent are U.S. citizens and the majority (80%) are here on temporary visas.

SCOPE AND METHOD

OBJECTIVES

The 1992 Starting Salary Survey is the 41st 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" edition of the *Chemical & Engineering News*. This year preliminary results were published on October 19.

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 1991-92 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, 1991 and June, 1992. Approximately one-fourth of all departments provided names and addresses to ACS by the end of August. During the summer of 1992, 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 9,209 graduates. Approximately 3 weeks after each initial mailing, a second questionnaire and cover letter were sent to non-respondents. By the cutoff date of October 12, ACS had received 4,682 usable responses. Another 482 questionnaires were returned as non deliverable. A comparison of characteristics of respondents with graduates from departments that did not participate in the survey and with graduates who did not mail back completed questionnaires can be found in the Technical Notes.

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. The term "chemical engineer" refers to one who received a degree in chemical engineering. 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, 2,071 respondents classified as chemists indicated their highest degree as the bachelor's degree. The percent of this group who are seeking employment is listed as 8.9% (p=8.9). A "95% confidence interval" for this percent may be approximated by taking n and p to be about 2000 and 10%. The above table shows an approximate sampling error of 1.3%. Hence, the 95% confidence interval is 7.6% to 10.2%. 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.

NONRESPONSE AND SAMPLING ERROR

A comparison of several characteristics of the 1992 respondents with characteristics of the sample reveals that respondents were slightly more likely than nonrespondents to have bachelor's degrees, to be chemical engineering graduates, and if chemistry graduates, to have completed ACS approved programs.

Comparison of Survey Results and Sample Characteristics, 1992

	Starting Salary Respondents 1992 N=4,682	Sample Characteristics 1992 N=9,209
Chemistry	78%	80%
Chemical Engineering	22%	20%
Chemistry		
Bachelor's	75%	73%
Master's	10%	12%
Doctorate	15%	15%
Bachelor's		
ACS approved	45%	42%
Non-approved	55%	58%
Chemical Engineering		
Bachelor's	76%	73%
Master's	13%	16%
Doctorate	11%	11%

Comparisons between the 1991 sample and the 1991 population of graduates (the last year for which data are currently available) indicate that the sample drawn was slightly biased toward BS graduates and chemistry graduates. Departments that send in the names and addresses of graduates before September have slightly more bachelor's graduates, slightly less MS and PhD graduates, and are slightly more likely to be chemistry than chemical engineering departments.

Comparison of Survey Results, Sample Characteristics, and Population Characteristics, 1991

	Starting Salary Results 1991 N=4,662	Sample Characteristics 1991 N=9,001	Characteristics of All graduates 1991 N=16,184
Chemistry	75%	76%	72%
Chemical Engineering	25%	24%	28%
Chemistry			
Bachelor's	73%	72%	67%
Master's	10%	12%	14%
Doctorate	17%	16%	19%
Bachelor's			
ACS approved	45%	40%	42%
Non-approved	55%	60%	58%
Chemical Engineering			
Bachelor's	74%	72%	69%
Master's	14%	16%	18%
Doctorate	12%	11%	13%

LIST OF TABLES

Table A-1

SALARIES of CHEMISTS employed FULL-TIME
by DEGREE and EXPERIENCE
1992 Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
WORK EXPERIENCE			
Less than 12 months			
Median	24,000	31,500	47,500
Mean	24,764	31,626	43,499
Std Dev	5,353	6,755	10,947
Count	371	52	124
12-36 months			
Median	25,500	30,000	48,000
Mean	25,804	30,579	42,648
Std Dev	5,279	5,777	12,061
Count	166	44	43
More than 36 months			
Median	30,000	35,000	46,000
Mean	29,715	35,705	43,433
Std Dev	7,712	9,513	12,225
Count	100	53	61
TOTAL			
Median	25,000	32,000	48,000
Mean	25,812	32,768	43,321
Std Dev	6,016	7,886	11,466
Count	637	149	228

Table A-2

SALARIES of CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and EXPERIENCE
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
WORK EXPERIENCE			
Less than 12 months			
Median	40,000	41,500	54,000
Mean	38,235	40,162	52,368
Std Dev	4,299	4,896	7,268
Count	267	22	47
12-36 months			
Median	39,650	41,695	54,000
Mean	39,035	41,569	52,500
Std Dev	3,272	4,088	8,777
Count	136	10	14
More than 36 months			
Median	36,250	45,408	60,000
Mean	36,203	46,066	60,085
Std Dev	7,445	11,000	14,586
Count	18	21	13
TOTAL			
Median	39,700	42,000	55,000
Mean	38,407	42,767	53,749
Std Dev	4,212	8,164	9,521
Count	421	53	74

Table A-3

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
in PRIVATE INDUSTRY by SEX and DEGREE
1992 Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Sex			
Male			
Median	26,000	35,000	51,000
Mean	26,362	35,112	49,980
Std Dev	5,044	7,189	6,893
Count	128	17	54
Female			
Median	25,000	33,500	50,350
Mean	25,875	33,725	48,990
Std Dev	5,533	5,458	5,532
Count	131	16	30
TOTAL			
Median	25,000	35,000	50,650
Mean	26,115	34,439	49,626
Std Dev	5,292	6,348	6,423
Count	259	33	84

Table A-4

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME in PRIVATE INDUSTRY by SEX and DEGREE
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Sex			
Male			
Median	40,000	40,800	54,950
Mean	38,952	39,641	53,922
Std Dev	3,410	5,660	3,994
Count	145	16	32
Female			
Median	40,000	41,500	56,000
Mean	38,574	41,667	54,686
Std Dev	3,778	1,756	6,779
Count	102	3	7
TOTAL			
Median	40,000	41,500	55,000
Mean	38,796	39,961	54,059
Std Dev	3,564	5,255	4,512
Count	247	19	39

Table A-5

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by SEX and DEGREE
1992 Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Sex			
Male			
Median	25,000	33,500	48,000
Mean	25,211	32,482	43,344
Std Dev	5,220	7,019	11,463
Count	177	26	82
Female			
Median	23,450	30,000	47,000
Mean	24,356	30,769	43,804
Std Dev	5,452	6,503	9,990
Count	194	26	42
TOTAL			
Median	24,000	31,500	47,500
Mean	24,764	31,626	43,499
Std Dev	5,353	6,755	10,947
Count	371	52	124

Table A-6

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and EMPLOYER
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Employer			
Industry			
Median	25,000	35,000	50,650
Mean	26,115	34,439	49,626
Std Dev	5,292	6,348	6,423
Count	259	33	84
College or univ			
Median	18,500	25,000	28,000
Mean	19,504	24,712	29,120
Std Dev	3,109	4,277	5,987
Count	21	8	27
High school			
Median	23,000	27,500	---
Mean	23,182	27,500	---
Std Dev	3,942	---	---
Count	19	1	0
Federal govt			
Median	24,000	29,145	34,250
Mean	23,528	28,684	34,935
Std Dev	4,747	6,559	3,098
Count	16	3	8
Military			
Median	20,300	---	40,000
Mean	21,281	---	40,000
Std Dev	3,577	---	---
Count	6	0	1
State or local govt			
Median	22,500	---	---
Mean	22,593	---	---
Std Dev	4,489	---	---
Count	10	0	0
Hospital or indep lab			
Median	20,250	28,000	25,000
Mean	20,647	26,333	26,667
Std Dev	3,103	3,786	7,638
Count	36	3	3
Other			
Median	24,750	29,400	39,600
Mean	25,050	29,450	39,600
Std Dev	6,453	1,320	---
Count	4	4	1
TOTAL			
Median	24,000	31,500	47,500
Mean	24,764	31,626	43,499
Std Dev	5,353	6,755	10,947
Count	371	52	124

Table A-7

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and EMPLOYER - MEN only
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Employer			
Industry			
Median	26,000	35,000	51,000
Mean	26,362	35,112	49,980
Std Dev	5,044	7,189	6,893
Count	128	17	54
College or univ			
Median	18,000	25,000	28,000
Mean	19,899	25,733	28,881
Std Dev	4,409	4,941	6,871
Count	7	3	19
High school			
Median	22,600	27,500	---
Mean	22,414	27,500	---
Std Dev	3,074	---	---
Count	7	1	0
Federal govt			
Median	25,000	29,145	34,250
Mean	23,712	29,145	34,487
Std Dev	5,496	---	2,542
Count	12	1	6
Military			
Median	21,800	---	---
Mean	22,150	---	---
Std Dev	4,110	---	---
Count	4	0	0
State or local govt			
Median	20,000	---	---
Mean	23,317	---	---
Std Dev	5,788	---	---
Count	3	0	0
Hospital or indep lab			
Median	21,500	28,500	30,000
Mean	21,119	28,500	30,000
Std Dev	3,247	707	7,071
Count	15	2	2
Other			
Median	32,000	28,400	39,600
Mean	32,000	28,400	39,600
Std Dev	---	566	---
Count	1	2	1
TOTAL			
Median	25,000	33,500	48,000
Mean	25,211	32,482	43,344
Std Dev	5,220	7,019	11,463
Count	177	26	82

Table A-8

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and EMPLOYER - WOMEN only
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Employer			
Industry			
Median	25,000	33,500	50,350
Mean	25,875	33,725	48,990
Std Dev	5,533	5,458	5,532
Count	131	16	30
College or univ			
Median	19,100	25,000	30,000
Mean	19,306	24,100	29,687
Std Dev	2,402	4,307	3,348
Count	14	5	8
High school			
Median	23,600	---	---
Mean	23,629	---	---
Std Dev	4,436	---	---
Count	12	0	0
Federal govt			
Median	23,000	28,453	36,278
Mean	22,976	28,453	36,278
Std Dev	1,182	9,259	5,484
Count	4	2	2
Military			
Median	19,542	---	40,000
Mean	19,542	---	40,000
Std Dev	2,062	---	---
Count	2	0	1
State or local govt			
Median	24,000	---	---
Mean	22,283	---	---
Std Dev	4,323	---	---
Count	7	0	0
Hospital or indep lab			
Median	20,000	22,000	20,000
Mean	20,310	22,000	20,000
Std Dev	3,030	---	---
Count	21	1	1
Other			
Median	20,500	30,500	---
Mean	22,733	30,500	---
Std Dev	5,501	707	---
Count	3	2	0
TOTAL			
Median	23,450	30,000	47,000
Mean	24,356	30,769	43,804
Std Dev	5,452	6,503	9,990
Count	194	26	42

Table A-9

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and TYPE OF INDUSTRY
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Type of Industry			
Nonmanufacturing			
Median	22,500	33,000	45,000
Mean	23,261	32,194	42,876
Std Dev	4,488	8,505	9,121
Count	82	9	13
Aerospace			
Median	40,000	---	---
Mean	40,000	---	---
Std Dev	---	---	---
Count	1	0	0
Basic chemicals			
Median	28,000	24,000	50,000
Mean	25,671	24,000	51,429
Std Dev	5,771	---	3,994
Count	7	1	7
Specialty chemicals			
Median	25,000	40,200	45,500
Mean	26,031	40,200	44,037
Std Dev	5,563	8,061	9,158
Count	39	2	12
Agricultural chemicals			
Median	27,636	---	49,350
Mean	29,193	---	46,470
Std Dev	5,128	---	5,769
Count	4	0	5
Electronics			
Median	27,500	25,000	49,500
Mean	27,175	25,000	49,500
Std Dev	5,208	---	---
Count	4	1	1
Petroleum			
Median	34,000	38,250	52,000
Mean	32,343	37,750	50,957
Std Dev	4,421	1,190	3,263
Count	7	4	7
Pharmaceuticals			
Median	28,000	35,000	52,500
Mean	27,944	34,794	53,156
Std Dev	5,031	4,619	3,638
Count	78	17	25
Plastics			
Median	25,000	---	50,500
Mean	25,660	---	50,633
Std Dev	2,594	---	2,702
Count	5	0	3
Other manuf			
Median	24,000	33,000	51,000
Mean	25,295	33,000	51,431
Std Dev	4,995	---	3,714
Count	47	1	13
TOTAL			
Median	25,000	34,500	50,350
Mean	25,880	34,133	49,230
Std Dev	5,367	6,287	6,951
Count	274	35	86

Table A-10

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
in INDUSTRY by DEGREE and EMPLOYER SIZE
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Employer Size			
Less than 500			
Median	22,500	31,500	44,500
Mean	22,841	31,400	43,250
Std Dev	3,875	5,330	11,355
Count	95	8	12
500 to 2,499			
Median	26,000	37,900	48,000
Mean	26,404	33,743	48,604
Std Dev	4,952	10,393	2,473
Count	63	7	8
2,500 to 9,999			
Median	28,040	33,500	51,850
Mean	28,076	34,450	51,428
Std Dev	4,686	4,706	5,144
Count	26	4	16
10,000 to 24,999			
Median	31,800	37,000	51,000
Mean	30,431	38,100	50,500
Std Dev	4,430	6,127	3,209
Count	21	4	6
25,000 or more			
Median	28,936	35,000	51,000
Mean	29,226	35,600	51,199
Std Dev	5,170	3,606	4,425
Count	50	9	40
TOTAL			
Median	25,000	34,750	50,900
Mean	26,132	34,312	49,776
Std Dev	5,317	6,407	6,405
Count	255	32	82

Table A-11

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and WORK FUNCTION
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Work Function			
Teaching			
Median	22,800	25,000	29,000
Mean	22,930	24,567	30,902
Std Dev	4,382	3,172	5,208
Count	22	3	17
Management			
Median	28,550	41,000	40,500
Mean	29,243	41,000	40,500
Std Dev	9,048	---	7,778
Count	10	1	2
Basic research			
Median	23,400	32,500	41,378
Mean	24,145	32,718	39,864
Std Dev	5,448	8,040	12,715
Count	73	11	32
Applied research			
Median	26,500	35,000	50,800
Mean	26,035	34,532	49,699
Std Dev	4,544	5,120	6,401
Count	88	19	65
Production			
Median	24,000	28,800	46,000
Mean	24,946	28,350	46,000
Std Dev	5,239	7,206	1,414
Count	109	11	2
Other			
Median	22,750	29,000	34,250
Mean	23,753	30,000	32,625
Std Dev	5,290	2,828	5,282
Count	64	5	4
TOTAL			
Median	24,000	32,250	48,000
Mean	24,836	31,851	43,729
Std Dev	5,315	6,745	10,882
Count	366	50	122

Table A-12

SALARIES of INEXPERIENCED BS CHEMISTS employed FULL-TIME
by EMPLOYER and CERTIFICATION
1992 ACS Starting Salary Survey

	CURRICULUM APPROVED?		TOTAL
	No	Yes	
Employer			
Industry			
Median	25,000	25,000	25,000
Mean	25,944	26,311	26,115
Std Dev	5,495	5,067	5,292
Count	138	121	259
College or univ			
Median	18,000	21,096	18,500
Mean	19,082	21,298	19,504
Std Dev	3,286	1,249	3,109
Count	17	4	21
High school			
Median	23,600	22,300	23,000
Mean	23,132	23,320	23,182
Std Dev	4,037	4,113	3,942
Count	14	5	19
Federal govt			
Median	24,500	22,953	24,000
Mean	23,771	23,124	23,528
Std Dev	5,488	3,618	4,747
Count	10	6	16
Military			
Median	---	20,300	20,300
Mean	---	21,281	21,281
Std Dev	---	3,577	3,577
Count	0	6	6
State or local govt			
Median	20,500	27,515	22,500
Mean	21,363	27,515	22,593
Std Dev	3,936	3,514	4,489
Count	8	2	10
Hospital or indep lab			
Median	20,750	19,500	20,250
Mean	20,453	21,150	20,647
Std Dev	2,881	3,742	3,103
Count	26	10	36
Other			
Median	29,000	20,500	24,750
Mean	26,567	20,500	25,050
Std Dev	6,976	---	6,453
Count	3	1	4
TOTAL			
Median	23,450	25,000	24,000
Mean	24,299	25,412	24,764
Std Dev	5,512	5,069	5,353
Count	216	155	371

Table A-13

SALARIES of INEXPERIENCED MS and PhD CHEMISTS employed FULL-TIME
by DEGREE and DEGREE SPECIALTY
1992 ACS Starting Salary Survey

	Highest Degree	
	MS	PHD
Degree Field		
Biochemistry		
Median	25,000	51,000
Mean	27,429	47,900
Std Dev	7,708	12,147
Count	5	5
General chem		
Median	31,000	---
Mean	31,551	---
Std Dev	8,004	---
Count	6	0
Analytical chem		
Median	32,250	50,000
Mean	32,025	47,177
Std Dev	6,348	8,424
Count	16	46
Inorganic chem		
Median	26,500	44,000
Mean	27,283	42,005
Std Dev	7,258	10,102
Count	6	22
Organic chem		
Median	35,000	49,000
Mean	34,525	43,646
Std Dev	5,723	12,139
Count	12	27
Physical chem		
Median	32,000	32,000
Mean	32,000	34,702
Std Dev	2,828	11,463
Count	2	16
Polymer chem		
Median	30,000	41,000
Mean	34,633	40,667
Std Dev	9,808	11,776
Count	3	6
Other chem		
Median	29,900	41,250
Mean	29,900	41,250
Std Dev	1,556	15,910
Count	2	2
TOTAL		
Median	31,500	47,500
Mean	31,626	43,499
Std Dev	6,755	10,947
Count	52	124

Table A-14

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and GEOGRAPHIC REGION
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
REGION			
Pacific			
Median	24,500	29,573	48,000
Mean	25,208	30,006	45,636
Std Dev	5,255	5,408	9,426
Count	37	8	11
Mountain			
Median	21,906	22,000	37,000
Mean	21,780	23,886	39,333
Std Dev	3,739	6,052	8,737
Count	15	7	3
West North Central			
Median	21,650	32,750	34,712
Mean	22,559	32,750	36,982
Std Dev	6,802	7,425	12,616
Count	22	2	10
West South Central			
Median	22,500	28,000	49,350
Mean	23,736	28,429	48,171
Std Dev	5,086	6,846	4,809
Count	25	7	11
East North Central			
Median	24,730	34,500	48,150
Mean	25,308	34,250	45,255
Std Dev	5,176	4,580	10,290
Count	106	6	30
East South Central			
Median	24,000	33,000	43,000
Mean	23,462	33,000	39,600
Std Dev	3,972	2,828	12,341
Count	16	2	5
Middle Atlantic			
Median	25,500	35,650	50,000
Mean	25,656	35,950	45,988
Std Dev	5,934	6,831	9,599
Count	68	8	17
South Atlantic			
Median	23,000	32,000	39,800
Mean	24,472	32,300	42,098
Std Dev	5,171	5,088	9,999
Count	50	7	24
New England			
Median	24,500	38,700	43,000
Mean	25,518	39,400	41,995
Std Dev	5,016	2,218	16,586
Count	20	4	12
TOTAL			
Median	24,000	32,000	48,000
Mean	24,751	31,658	43,670
Std Dev	5,385	6,818	10,825
Count	359	51	123

Table A-15

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by SEX and DEGREE
1992 Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Sex			
Male			
Median	40,000	41,550	53,350
Mean	38,601	39,876	52,592
Std Dev	3,843	5,361	6,593
Count	155	18	38
Female			
Median	39,550	41,150	56,000
Mean	37,728	41,450	51,422
Std Dev	4,832	1,498	10,070
Count	112	4	9
TOTAL			
Median	40,000	41,500	54,000
Mean	38,235	40,162	52,368
Std Dev	4,299	4,896	7,268
Count	267	22	47

Table A-16

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and EMPLOYER
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Employer			
Industry			
Median	40,000	41,500	55,000
Mean	38,796	39,961	54,059
Std Dev	3,564	5,255	4,512
Count	247	19	39
College or univ			
Median	23,000	---	38,000
Mean	23,000	---	42,600
Std Dev	---	---	14,960
Count	1	0	5
Federal govt			
Median	29,238	42,000	50,000
Mean	30,678	42,000	50,000
Std Dev	7,621	---	2,828
Count	8	1	2
Military			
Median	24,000	---	---
Mean	24,000	---	---
Std Dev	---	---	---
Count	1	0	0
State or local govt			
Median	30,000	---	---
Mean	30,000	---	---
Std Dev	0	---	---
Count	3	0	0
Hospital or indep lab			
Median	28,000	---	---
Mean	28,000	---	---
Std Dev	---	---	---
Count	1	0	0
Other			
Median	36,750	41,150	40,000
Mean	35,950	41,150	40,000
Std Dev	3,896	495	---
Count	6	2	1
TOTAL			
Median	40,000	41,500	54,000
Mean	38,235	40,162	52,368
Std Dev	4,299	4,896	7,268
Count	267	22	47

Table A-17

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and EMPLOYER - MEN only
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Employer			
Industry			
Median	40,000	40,800	54,950
Mean	38,952	39,641	53,922
Std Dev	3,410	5,660	3,994
Count	145	16	32
College or univ			
Median	---	---	38,000
Mean	---	---	44,333
Std Dev	---	---	18,339
Count	0	0	3
Federal govt			
Median	30,000	42,000	50,000
Mean	32,085	42,000	50,000
Std Dev	7,237	---	2,828
Count	5	1	2
State or local govt			
Median	30,000	---	---
Mean	30,000	---	---
Std Dev	0	---	---
Count	2	0	0
Other			
Median	39,000	41,500	40,000
Mean	38,233	41,500	40,000
Std Dev	2,442	---	---
Count	3	1	1
TOTAL			
Median	40,000	41,550	53,350
Mean	38,601	39,876	52,592
Std Dev	3,843	5,361	6,593
Count	155	18	38

Table A-18

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and EMPLOYER - WOMEN only
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Employer			
Industry			
Median	40,000	41,500	56,000
Mean	38,574	41,667	54,686
Std Dev	3,778	1,756	6,779
Count	102	3	7
College or univ			
Median	23,000	---	40,000
Mean	23,000	---	40,000
Std Dev	---	---	14,142
Count	1	0	2
Federal govt			
Median	23,000	---	---
Mean	28,333	---	---
Std Dev	9,238	---	---
Count	3	0	0
Military			
Median	24,000	---	---
Mean	24,000	---	---
Std Dev	---	---	---
Count	1	0	0
State or local govt			
Median	30,000	---	---
Mean	30,000	---	---
Std Dev	---	---	---
Count	1	0	0
Hospital or indep lab			
Median	28,000	---	---
Mean	28,000	---	---
Std Dev	---	---	---
Count	1	0	0
Other			
Median	33,000	40,800	---
Mean	33,667	40,800	---
Std Dev	4,041	---	---
Count	3	1	0
TOTAL			
Median	39,550	41,150	56,000
Mean	37,728	41,450	51,422
Std Dev	4,832	1,498	10,070
Count	112	4	9

Table A-19

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and TYPE OF INDUSTRY
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Type of Industry			
Nonmanufacturing			
Median	38,500	39,800	57,000
Mean	36,321	37,038	54,667
Std Dev	4,991	6,002	7,312
Count	37	8	6
Aerospace			
Median	34,400	40,000	46,500
Mean	34,400	40,000	46,500
Std Dev	4,384	---	9,192
Count	2	1	2
Basic chemicals			
Median	40,080	41,600	56,450
Mean	39,543	41,267	56,650
Std Dev	3,151	1,429	2,876
Count	41	3	4
Specialty chemicals			
Median	39,700	40,000	52,200
Mean	39,502	40,000	53,314
Std Dev	1,777	---	2,039
Count	33	1	7
Agricultural chemicals			
Median	40,400	---	---
Mean	40,400	---	---
Std Dev	849	---	---
Count	2	0	0
Electronics			
Median	36,000	---	58,800
Mean	36,500	---	58,800
Std Dev	1,732	---	---
Count	4	0	1
Petroleum			
Median	41,000	44,760	55,750
Mean	40,775	44,112	55,475
Std Dev	2,191	1,750	1,805
Count	35	5	8
Pharmaceuticals			
Median	40,500	---	53,250
Mean	38,736	---	51,425
Std Dev	4,287	---	6,065
Count	31	0	4
Plastics			
Median	40,200	44,000	53,000
Mean	39,758	44,000	53,000
Std Dev	1,515	---	---
Count	17	1	1
Other manuf			
Median	38,800	38,450	54,000
Mean	37,602	38,450	54,367
Std Dev	3,770	7,142	2,174
Count	50	2	6
TOTAL			
Median	40,000	41,500	55,000
Mean	38,684	40,074	54,059
Std Dev	3,693	4,999	4,512
Count	252	21	39

Table A-20

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and EMPLOYER SIZE
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Employer Size			
Less than 500			
Median	34,250	31,700	56,000
Mean	34,087	33,850	52,143
Std Dev	5,449	5,665	9,100
Count	24	4	7
500 to 2,499			
Median	39,575	41,150	54,000
Mean	37,330	41,100	50,433
Std Dev	4,803	1,219	12,256
Count	52	4	6
2,500 to 9,999			
Median	39,000	42,200	53,000
Mean	37,865	42,200	50,756
Std Dev	3,912	3,111	9,697
Count	37	2	9
10,000 to 24,999			
Median	40,000	45,000	54,000
Mean	39,846	45,000	54,457
Std Dev	1,339	---	3,022
Count	41	1	7
25,000 or more			
Median	40,000	41,550	54,300
Mean	39,181	41,086	53,094
Std Dev	3,794	4,455	4,118
Count	106	10	18
TOTAL			
Median	40,000	41,500	54,000
Mean	38,258	40,003	52,368
Std Dev	4,240	4,958	7,268
Count	260	21	47

Table A-21

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and WORK FUNCTION
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
Work Function			
Teaching			
Median	---	---	57,500
Mean	---	---	57,500
Std Dev	---	---	10,607
Count	0	0	2
Management			
Median	39,000	---	---
Mean	37,964	---	---
Std Dev	4,733	---	---
Count	11	0	0
Basic research			
Median	27,820	30,000	53,450
Mean	28,864	33,833	47,983
Std Dev	6,568	6,640	11,248
Count	5	3	6
Applied research			
Median	40,000	41,150	55,000
Mean	38,959	41,172	53,470
Std Dev	3,668	3,080	5,690
Count	130	12	37
Production			
Median	39,710	42,900	40,000
Mean	38,711	43,100	40,000
Std Dev	3,366	1,445	---
Count	86	4	1
Other			
Median	38,500	39,600	40,000
Mean	35,797	38,533	40,000
Std Dev	5,649	8,053	---
Count	35	3	1
TOTAL			
Median	40,000	41,500	54,000
Mean	38,235	40,162	52,368
Std Dev	4,299	4,896	7,268
Count	267	22	47

Table A-22

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and GEOGRAPHIC REGION
1992 ACS Starting Salary Survey

	Highest Degree		
	BS	MS	PHD
REGION			
Pacific			
Median	40,000	40,000	53,000
Mean	38,467	40,133	51,222
Std Dev	5,485	611	9,091
Count	18	3	9
Mountain			
Median	38,000	44,000	30,000
Mean	37,033	44,000	30,000
Std Dev	1,762	2,828	---
Count	3	2	1
West North Central			
Median	38,160	---	55,100
Mean	36,921	---	55,300
Std Dev	4,405	---	2,056
Count	15	0	4
West South Central			
Median	40,500	42,050	55,500
Mean	40,342	39,958	52,357
Std Dev	1,774	5,416	10,185
Count	71	8	7
East North Central			
Median	39,650	43,250	52,900
Mean	38,162	43,250	51,557
Std Dev	3,456	2,475	5,908
Count	38	2	7
East South Central			
Median	40,100	---	52,200
Mean	39,834	---	52,200
Std Dev	882	---	---
Count	14	0	1
Middle Atlantic			
Median	39,250	40,000	53,000
Mean	37,800	36,700	53,767
Std Dev	4,719	6,281	2,513
Count	56	5	9
South Atlantic			
Median	39,000	44,000	54,900
Mean	35,990	44,000	50,300
Std Dev	5,483	---	8,937
Count	43	1	3
New England			
Median	35,500	---	56,500
Mean	34,360	---	55,783
Std Dev	5,785	---	3,522
Count	8	0	6
TOTAL			
Median	39,900	41,500	54,000
Mean	38,228	40,098	52,368
Std Dev	4,306	5,007	7,268
Count	266	21	47

Table B-1a

CHEMISTRY GRADUATES
by EMPLOYMENT STATUS, SEX, and DEGREE
1992 Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	TOTAL	Male	Female	TOTAL	Male	Female	TOTAL
Full-Time in Chemistry	29.6% 344	35.6% 324	32.3% 668	40.6% 80	50.3% 73	44.7% 153	45.8% 169	47.6% 68	46.3% 237
Full-Time in Non-Chemistry	8.0% 93	8.5% 77	8.2% 170	7.6% 15	6.9% 10	7.3% 25	3.8% 14	.0% 0	2.7% 14
Fellowship	45.7% 531	37.9% 345	42.3% 876	46.7% 92	32.4% 47	40.6% 139	45.3% 167	45.5% 65	45.3% 232
Seeking Employment	7.8% 91	10.3% 94	8.9% 185	4.1% 8	8.3% 12	5.8% 20	4.6% 17	4.9% 7	4.7% 24
Not Seeking Employment	8.8% 102	7.7% 70	8.3% 172	1.0% 2	2.1% 3	1.5% 5	.5% 2	2.1% 3	1.0% 5
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table B-1b

CHEMISTRY GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1992, SEX, and DEGREE
1992 Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	TOTAL	Male	Female	TOTAL	Male	Female	TOTAL
Pursue Advanced Studies in Fall 1992									
Yes, full-time	59.0% 895	50.1% 576	55.2% 1471	47.8% 98	32.9% 48	41.6% 146	13.7% 48	10.4% 15	12.7% 63
Yes, part-time	7.2% 109	7.9% 91	7.5% 200	5.4% 11	9.6% 14	7.1% 25	1.4% 5	2.8% 4	1.8% 9
No	33.8% 513	42.0% 483	37.3% 996	46.8% 96	57.5% 84	51.3% 180	84.9% 298	86.8% 125	85.5% 423
TOTAL	100.0% 1517	100.0% 1150	100.0% 2667	100.0% 205	100.0% 146	100.0% 351	100.0% 351	100.0% 144	100.0% 495

Table B-2a

CHEMISTRY GRADUATES
by EMPLOYMENT STATUS, CITIZENSHIP, and DEGREE
1992 Starting Salary Survey

	Citizenship				TOTAL
	U.S. Native	U.S. Naturalized	U.S. Permanent Resident	Other Visa	
Bachelors					
Full-time in Chemistry	32.1% 615	33.7% 29	37.3% 19	18.8% 3	32.2% 666
Full-time in Non-Chemistry	8.1% 156	10.5% 9	9.8% 5	.0% 0	8.2% 170
Fellowship	43.2% 827	29.1% 25	23.5% 12	68.8% 11	42.3% 875
Seeking Employment	8.6% 164	15.1% 13	15.7% 8	.0% 0	8.9% 185
Not Seeking Employment	8.0% 154	11.6% 10	13.7% 7	12.5% 2	8.4% 173
Masters					
Full-Time in Chemistry	46.1% 105	66.7% 10	46.2% 6	37.9% 33	44.9% 154
Full-Time in Non-Chemistry	8.8% 20	6.7% 1	15.4% 2	2.3% 2	7.3% 25
Fellowship	38.6% 88	26.7% 4	23.1% 3	50.6% 44	40.5% 139
Seeking Employment	4.8% 11	.0% 0	15.4% 2	8.0% 7	5.8% 20
Not Seeking Employment	1.8% 4	.0% 0	.0% 0	1.1% 1	1.5% 5
Doctorate					
Full-Time in Chemistry	49.3% 166	55.6% 5	45.8% 11	39.0% 55	46.4% 237
Full-Time in Non-Chemistry	3.0% 10	.0% 0	.0% 0	2.8% 4	2.7% 14
Fellowship	44.2% 149	44.4% 4	37.5% 9	48.9% 69	45.2% 231
Seeking Employment	2.4% 8	.0% 0	16.7% 4	8.5% 12	4.7% 24
Not Seeking Employment	1.2% 4	.0% 0	.0% 0	.7% 1	1.0% 5
TOTAL	100.0% 2481	100.0% 110	100.0% 88	100.0% 244	100.0% 2923

Table B-2b

CHEMISTRY GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1992, CITIZENSHIP, and DEGREE
1992 Starting Salary Survey

	Citizenship				TOTAL
	U.S. Native	U.S. Naturalized	U.S. Permanent Resident	Other Visa	
Pursue Advanced Studies in Fall 1992					
Bachelors					
Yes, full-time	55.1% 1344	54.9% 73	53.3% 40	82.4% 14	55.2% 1471
Yes, part-time	7.3% 177	12.8% 17	8.0% 6	.0% 0	7.5% 200
No	37.6% 917	32.3% 43	38.7% 29	17.6% 3	37.3% 992
Masters					
Yes, full-time	39.7% 94	33.3% 5	21.4% 3	51.2% 44	41.5% 146
Yes, part-time	7.6% 18	6.7% 1	.0% 0	7.0% 6	7.1% 25
No	52.7% 125	60.0% 9	78.6% 11	41.9% 36	51.4% 181
Doctorate					
Yes, full-time	13.1% 44	9.1% 1	7.7% 2	13.1% 16	12.8% 63
Yes, part-time	1.2% 4	.0% 0	7.7% 2	2.5% 3	1.8% 9
No	85.7% 287	90.9% 10	84.6% 22	84.4% 103	85.4% 422
TOTAL	100.0% 3010	100.0% 159	100.0% 115	100.0% 225	100.0% 3509

Table B-3a

BS CHEMISTRY GRADUATES
by EMPLOYMENT STATUS, ETHNICITY, and DEGREE
1992 Starting Salary Survey

	Race								TOTAL
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Full-Time in Chemistry	35.7% 5	20.5% 8	11.8% 2	40.8% 31	29.8% 17	22.4% 11	32.6% 585	30.0% 6	32.2% 665
Full-Time in Non-Chemistry	7.1% 1	5.1% 2	11.8% 2	6.6% 5	7.0% 4	8.2% 4	8.3% 148	20.0% 4	8.2% 170
Fellowship	50.0% 7	53.8% 21	23.5% 4	28.9% 22	35.1% 20	49.0% 24	42.9% 769	35.0% 7	42.3% 874
Seeking Employment	7.1% 1	10.3% 4	11.8% 2	10.5% 8	17.5% 10	8.2% 4	8.5% 153	15.0% 3	9.0% 185
Not Seeking Employment	.0% 0	10.3% 4	41.2% 7	13.2% 10	10.5% 6	12.2% 6	7.7% 138	.0% 0	8.3% 171
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table B-3a (Continued)

MS CHEMISTRY GRADUATES
by EMPLOYMENT STATUS, ETHNICITY, and DEGREE
1992 Starting Salary Survey

	Race								TOTAL
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Full-Time in Chemistry	14 .0% 0	39 44.3% 31	17 25.0% 2	76 55.6% 10	57 28.6% 2	49 62.5% 5	1793 45.3% 102	20 33.3% 1	2065 45.0% 153
Full-Time in Non-Chemistry	.0% 0	2.9% 2	.0% 0	5.6% 1	.0% 0	.0% 0	9.8% 22	.0% 0	7.4% 25
Fellowship	.0% 0	44.3% 31	62.5% 5	22.2% 4	57.1% 4	37.5% 3	39.1% 88	66.7% 2	40.3% 137
Seeking Employment	100.0% 1	8.6% 6	12.5% 1	11.1% 2	14.3% 1	.0% 0	4.0% 9	.0% 0	5.9% 20
Not Seeking Employment	.0% 0	.0% 0	.0% 0	5.6% 1	.0% 0	.0% 0	1.8% 4	.0% 0	1.5% 5
TOTAL	100.0% 1	100.0% 70	100.0% 8	100.0% 18	100.0% 7	100.0% 8	100.0% 225	100.0% 3	100.0% 340

Table B-3a (Continued)

PhD CHEMISTRY GRADUATES
by EMPLOYMENT STATUS, ETHNICITY, and DEGREE
1992 Starting Salary Survey

	Race								TOTAL
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Full-Time in Chemistry	100.0% 1	45.8% 44	26.1% 6	45.8% 11	25.0% 2	50.0% 6	47.8% 164	60.0% 3	46.3% 237
Full-Time in Non-Chemistry	.0% 0	4.2% 4	4.3% 1	.0% 0	.0% 0	.0% 0	2.6% 9	.0% 0	2.7% 14
Fellowship	.0% 0	40.6% 39	56.5% 13	50.0% 12	62.5% 5	50.0% 6	45.2% 155	40.0% 2	45.3% 232
Seeking Employment	.0% 0	8.3% 8	13.0% 3	4.2% 1	12.5% 1	.0% 0	3.2% 11	.0% 0	4.7% 24
Not Seeking Employment	.0% 0	1.0% 1	.0% 0	.0% 0	.0% 0	.0% 0	1.2% 4	.0% 0	1.0% 5
TOTAL	100.0% 1	100.0% 96	100.0% 23	100.0% 24	100.0% 8	100.0% 12	100.0% 343	100.0% 5	100.0% 512

Table B-3b

CHEMISTRY GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1992, ETHNICITY, and DEGREE
1992 Starting Salary Survey

	Race								TOTAL
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Pursue Advanced Studies in Fall 1992									
Bachelors									
Yes, full-time	61.1% 11	71.4% 50	75.0% 21	49.6% 57	55.0% 44	67.2% 43	54.7% 1227	37.5% 9	55.3% 1462
Yes, part-time	27.8% 5	5.7% 4	7.1% 2	13.0% 15	16.3% 13	3.1% 2	6.8% 153	4.2% 1	7.4% 195
No	11.1% 2	22.9% 16	17.9% 5	37.4% 43	28.7% 23	29.7% 19	38.5% 864	58.3% 14	37.3% 986
TOTAL	100.0% 18	100.0% 70	100.0% 28	100.0% 115	100.0% 80	100.0% 64	100.0% 2244	100.0% 24	100.0% 2643
Masters									
Yes, full-time	100.0% 1	45.1% 32	71.4% 5	23.5% 4	42.9% 3	30.0% 3	39.8% 92	66.7% 2	40.9% 142
Yes, part-time	.0% 0	7.0% 5	14.3% 1	5.9% 1	.0% 0	20.0% 2	6.9% 16	.0% 0	7.2% 25
No	.0% 0	47.9% 34	14.3% 1	70.6% 12	57.1% 4	50.0% 5	53.2% 123	33.3% 1	51.9% 180
TOTAL	100.0% 1	100.0% 71	100.0% 7	100.0% 17	100.0% 7	100.0% 10	100.0% 231	100.0% 3	100.0% 347

Table B-3b (Continued)

CHEMISTRY GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1992, ETHNICITY, and DEGREE
1992 Starting Salary Survey

	Race								TOTAL
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Pursue Advanced Studies in Fall 1992									
Doctorate									
Yes, full-time	.0% 0	5.9% 5	30.4% 7	20.0% 4	14.3% 1	.0% 0	13.3% 45	.0% 0	12.6% 62
Yes, part-time	.0% 0	3.5% 3	4.3% 1	5.0% 1	.0% 0	.0% 0	1.2% 4	.0% 0	1.8% 9
No	100.0% 1	90.6% 77	65.2% 15	75.0% 15	85.7% 6	100.0% 13	85.5% 290	100.0% 5	85.6% 422
TOTAL	100.0% 1	100.0% 85	100.0% 23	100.0% 20	100.0% 7	100.0% 13	100.0% 339	100.0% 5	100.0% 493

Table B-4a

BS CHEMISTRY GRADUATES
by EMPLOYMENT STATUS and CERTIFICATION
1992 Starting Salary Survey

	CURRICULUM APPROVED?		TOTAL
	No	Yes	
Full-Time in Chemistry	35.6% 371	28.8% 297	32.2% 668
Full-Time in Non-Chemistry	10.2% 106	6.2% 64	8.2% 170
Fellowship	30.0% 313	54.7% 563	42.3% 876
Seeking Employment	11.7% 122	6.1% 63	8.9% 185
Not Seeking Employment	12.5% 130	4.2% 43	8.3% 173
TOTAL	100.0% 1042	100.0% 1030	100.0% 2072

Table B-4b

BS CHEMISTRY GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1992 and CERTIFICATION
1992 Starting Salary Survey

	CURRICULUM APPROVED?		TOTAL
	No	Yes	
Pursue Advanced Studies in Fall 1992			
Yes, full-time	41.9% 968	59.4% 714	47.8% 1682
Yes, part-time	7.1% 165	5.7% 69	6.7% 234
No	51.0% 1180	34.9% 420	45.5% 1600
TOTAL	100.0% 2313	100.0% 1203	100.0% 3516

Table B-5

MASTERS CHEMISTRY GRADUATES
by EMPLOYMENT STATUS and DEGREE SPECIALTY
1992 Starting Salary Survey

	FT IN CHEM	FT IN NONCHEM	FELLOW-SHIP	SEEKING EMPL	NOT SEEK EMPL	TOTAL
Degree Field						
Biochemistry	10.4% 59.3% 16	12.0% 11.1% 3	5.8% 29.6% 8	.0% .0% 0	.0% .0% 0	7.9% 100.0% 27
General chem	14.3% 55.0% 22	20.0% 12.5% 5	7.2% 25.0% 10	15.0% 7.5% 3	.0% .0% 0	11.7% 100.0% 40
Analytical chem	28.6% 55.0% 44	24.0% 7.5% 6	18.7% 32.5% 26	20.0% 5.0% 4	.0% .0% 0	23.3% 100.0% 80
Inorganic chem	7.8% 29.3% 12	.0% .0% 0	18.0% 61.0% 25	20.0% 9.8% 4	.0% .0% 0	12.0% 100.0% 41
Organic chem	22.7% 41.2% 35	12.0% 3.5% 3	28.8% 47.1% 40	20.0% 4.7% 4	60.0% 3.5% 3	24.8% 100.0% 85
Physical chem	6.5% 25.0% 10	12.0% 7.5% 3	17.3% 60.0% 24	5.0% 2.5% 1	40.0% 5.0% 2	11.7% 100.0% 40
Polymer chem	5.8% 56.3% 9	12.0% 18.8% 3	2.2% 18.8% 3	5.0% 6.3% 1	.0% .0% 0	4.7% 100.0% 16
Other chem	3.9% 42.9% 6	8.0% 14.3% 2	2.2% 21.4% 3	15.0% 21.4% 3	.0% .0% 0	4.1% 100.0% 14
TOTAL	100.0% 44.9% 154	100.0% 7.3% 25	100.0% 40.5% 139	100.0% 5.8% 20	100.0% 1.5% 5	100.0% 100.0% 343

Table B-6

PhD CHEMISTRY GRADUATES
by EMPLOYMENT STATUS and DEGREE SPECIALTY
1992 Starting Salary Survey

	FT IN CHEM	FT IN NONCHEM	FELLOW-SHIP	SEEKING EMPL	NOT SEEK EMPL	TOTAL
Degree Field						
Biochemistry	6.8% 34.8% 16	.0% .0% 0	11.2% 56.5% 26	8.3% 4.3% 2	40.0% 4.3% 2	9.0% 100.0% 46
General chem	.0% .0% 0	.0% .0% 0	1.3% 100.0% 3	.0% .0% 0	.0% .0% 0	.6% 100.0% 3
Analytical chem	34.2% 72.3% 81	14.3% 1.8% 2	11.2% 23.2% 26	12.5% 2.7% 3	.0% .0% 0	21.9% 100.0% 112
Inorganic chem	15.6% 45.1% 37	7.1% 1.2% 1	16.4% 46.3% 38	16.7% 4.9% 4	40.0% 2.4% 2	16.0% 100.0% 82
Organic chem	24.9% 41.0% 59	7.1% .7% 1	32.8% 52.8% 76	33.3% 5.6% 8	.0% .0% 0	28.1% 100.0% 144
Physical chem	12.2% 28.4% 29	57.1% 7.8% 8	25.0% 56.9% 58	25.0% 5.9% 6	20.0% 1.0% 1	19.9% 100.0% 102
Polymer chem	3.8% 75.0% 9	7.1% 8.3% 1	.4% 8.3% 1	4.2% 8.3% 1	.0% .0% 0	2.3% 100.0% 12
Other chem	2.5% 54.5% 6	7.1% 9.1% 1	1.7% 36.4% 4	.0% .0% 0	.0% .0% 0	2.1% 100.0% 11
TOTAL	100.0% 46.3% 237	100.0% 2.7% 14	100.0% 45.3% 232	100.0% 4.7% 24	100.0% 1.0% 5	100.0% 100.0% 512

Table B-7a

CHEMICAL ENGINEERING GRADUATES
by EMPLOYMENT STATUS, SEX, and DEGREE
1992 Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	TOTAL	Male	Female	TOTAL	Male	Female	TOTAL
Full-Time in Chemistry	60.0% 258	66.3% 175	62.4% 433	46.2% 43	40.7% 11	45.0% 54	72.5% 66	81.3% 13	73.8% 79
Full-Time in Non-Chemistry	6.3% 27	12.5% 33	8.6% 60	7.5% 7	3.7% 1	6.7% 8	6.6% 6	.0% 0	5.6% 6
Fellowship	22.1% 95	12.1% 32	18.3% 127	39.8% 37	51.9% 14	42.5% 51	16.5% 15	6.3% 1	15.0% 16
Seeking Employment	9.3% 40	6.1% 16	8.1% 56	5.4% 5	3.7% 1	5.0% 6	4.4% 4	12.5% 2	5.6% 6
Not Seeking Employment	2.3% 10	3.0% 8	2.6% 18	1.1% 1	.0% 0	.8% 1	.0% 0	.0% 0	.0% 0
TOTAL	100.0% 430	100.0% 264	100.0% 694	100.0% 93	100.0% 27	100.0% 120	100.0% 91	100.0% 16	100.0% 107

Table B-7b

CHEMICAL ENGINEERING GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1992, SEX, and DEGREE
1992 Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	TOTAL	Male	Female	TOTAL	Male	Female	TOTAL
Pursue Advanced Studies in Fall 1992									
Yes, full-time	26.2% 123	16.1% 45	22.4% 168	42.3% 41	55.2% 16	45.2% 57	2.2% 2	.0% 0	1.9% 2
Yes, part-time	8.3% 39	6.8% 19	7.7% 58	6.2% 6	3.4% 1	5.6% 7	3.4% 3	.0% 0	2.9% 3
No	65.5% 308	77.1% 215	69.8% 523	51.5% 50	41.4% 12	49.2% 62	94.4% 84	100.0% 16	95.2% 100
TOTAL	100.0% 470	100.0% 279	100.0% 749	100.0% 97	100.0% 29	100.0% 126	100.0% 89	100.0% 16	100.0% 105

Table B-8a

CHEMICAL ENGINEERING GRADUATES
by EMPLOYMENT STATUS, CITIZENSHIP, and DEGREE
1992 Starting Salary Survey

	Citizenship				TOTAL
	U.S. Native	U.S. Naturalized	U.S. Permanent Resident	Other Visa	
Bachelors					
Full-Time in Chemistry	63.7% 407	48.5% 16	50.0% 7	37.5% 3	62.4% 433
Full-Time in Non-Chemistry	8.5% 54	12.1% 4	.0% 0	25.0% 2	8.6% 60
Fellowship	17.7% 113	24.2% 8	21.4% 3	37.5% 3	18.3% 127
Seeking Employment	7.5% 48	12.1% 4	28.6% 4	.0% 0	8.1% 56
Not Seeking Employment	2.7% 17	3.0% 1	.0% 0	.0% 0	2.6% 18
TOTAL	100.0% 639	100.0% 33	100.0% 14	100.0% 8	100.0% 694
Masters					
Full-Time in Chemistry	54.2% 39	.0% 0	40.0% 2	31.0% 13	44.6% 54
Full-Time in Non-Chemistry	9.7% 7	.0% 0	20.0% 1	.0% 0	6.6% 8
Fellowship	36.1% 26	.0% 0	20.0% 1	59.5% 25	43.0% 52
Seeking Employment	.0% 0	100.0% 2	20.0% 1	7.1% 3	5.0% 6
Not Seeking Employment	.0% 0	.0% 0	.0% 0	2.4% 1	.8% 1
TOTAL	100.0% 72	100.0% 2	100.0% 5	100.0% 42	100.0% 121
Doctorate					
Full-Time in Chemistry	78.5% 51	75.0% 3	70.0% 7	62.1% 18	73.1% 79
Full-Time in Non-Chemistry	6.2% 4	25.0% 1	.0% 0	3.4% 1	5.6% 6
Fellowship	13.8% 9	.0% 0	.0% 0	27.6% 8	15.7% 17
Seeking Employment	1.5% 1	.0% 0	30.0% 3	6.9% 2	5.6% 6
TOTAL	100.0% 65	100.0% 4	100.0% 10	100.0% 29	100.0% 108

Table B-8b

CHEMICAL ENGINEERING
by PLANS FOR FURTHER STUDIES IN FALL 1992, CITIZENSHIP, and DEGREE
1992 Starting Salary Survey

	Citizenship				TOTAL
	U.S. Native	U.S. Natural-ized	U.S. Permanent Resident	Other Visa	
Pursue Advanced Studies in Fall 1992					
Bachelors					
Yes, full-time	21.9% 151	28.9% 11	21.4% 3	37.5% 3	22.4% 168
Yes, part-time	7.1% 49	15.8% 6	21.4% 3	.0% 0	7.7% 58
No	71.0% 489	55.3% 21	57.1% 8	62.5% 5	69.8% 523
TOTAL	100.0% 689	100.0% 38	100.0% 14	100.0% 8	100.0% 749
Masters					
Yes, full-time	36.8% 28	33.3% 1	16.7% 1	66.7% 28	45.7% 58
Yes, part-time	7.9% 6	.0% 0	16.7% 1	.0% 0	5.5% 7
No	55.3% 42	66.7% 2	66.7% 4	33.3% 14	48.8% 62
TOTAL	100.0% 76	100.0% 3	100.0% 6	100.0% 42	100.0% 127
Doctorate					
Yes, full-time	3.0% 2	.0% 0	.0% 0	.0% 0	1.9% 2
Yes, part-time	1.5% 1	25.0% 1	.0% 0	4.0% 1	2.9% 3
No	95.5% 63	75.0% 3	100.0% 10	96.0% 24	95.2% 100
TOTAL	100.0% 66	100.0% 4	100.0% 10	100.0% 25	100.0% 105

Table B-9a

CHEMICAL ENGINEERING GRADUATES
by EMPLOYMENT STATUS, ETHNICITY, and DEGREE
1992 Starting Salary Survey

	Race								TOTAL
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Bachelors									
Full-Time in Chemistry	80.0% 4	33.3% 8	41.7% 5	58.3% 14	62.5% 10	28.6% 6	65.4% 383	40.0% 2	62.3% 432
Full-Time in Non-Chemistry	.0% 0	8.3% 2	25.0% 3	4.2% 1	6.3% 1	33.3% 7	7.7% 45	20.0% 1	8.7% 60
Fellowship	20.0% 1	41.7% 10	25.0% 3	20.8% 5	18.8% 3	14.3% 3	17.1% 100	40.0% 2	18.3% 127
Seeking Employment	.0% 0	12.5% 3	.0% 0	16.7% 4	12.5% 2	19.0% 4	7.3% 43	.0% 0	8.1% 56
Not Seeking Employment	.0% 0	4.2% 1	8.3% 1	.0% 0	.0% 0	4.8% 1	2.6% 15	.0% 0	2.6% 18
TOTAL	100.0% 5	100.0% 24	100.0% 12	100.0% 24	100.0% 16	100.0% 21	100.0% 586	100.0% 5	100.0% 693

Table B-9a (Continued)

CHEMICAL ENGINEERING GRADUATES
by EMPLOYMENT STATUS, ETHNICITY, and DEGREE
1992 Starting Salary Survey

	Race								TOTAL
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Masters									
Full-Time in Chemistry	.0% 0	38.9% 7	44.4% 4	13.3% 2	.0% 0	.0% 0	54.1% 40	50.0% 1	44.6% 54
Full-Time in Non-Chemistry	.0% 0	.0% 0	.0% 0	6.7% 1	.0% 0	.0% 0	8.1% 6	50.0% 1	6.6% 8
Fellowship	.0% 0	38.9% 7	55.6% 5	60.0% 9	100.0% 1	100.0% 2	37.8% 28	.0% 0	43.0% 52
Seeking Employment	.0% 0	22.2% 4	.0% 0	13.3% 2	.0% 0	.0% 0	.0% 0	.0% 0	5.0% 6
Not Seeking Employment	.0% 0	.0% 0	.0% 0	6.7% 1	.0% 0	.0% 0	.0% 0	.0% 0	.8% 1
TOTAL	.0% 0	100.0% 18	100.0% 9	100.0% 15	100.0% 1	100.0% 2	100.0% 74	100.0% 2	100.0% 121

Table B-9a (Continued)

CHEMICAL ENGINEERING GRADUATES
by EMPLOYMENT STATUS, ETHNICITY, and DEGREE
1992 Starting Salary Survey

	Race								TOTAL
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Doctorate									
Full-Time in Chemistry	.0% 0	66.7% 12	58.3% 7	40.0% 2	100.0% 1	100.0% 1	78.9% 56	.0% 0	73.1% 79
Full-Time in Non-Chemistry	.0% 0	5.6% 1	.0% 0	20.0% 1	.0% 0	.0% 0	5.6% 4	.0% 0	5.6% 6
Fellowship	.0% 0	16.7% 3	41.7% 5	20.0% 1	.0% 0	.0% 0	11.3% 8	.0% 0	15.7% 17
Seeking Employment	.0% 0	11.1% 2	.0% 0	20.0% 1	.0% 0	.0% 0	4.2% 3	.0% 0	5.6% 6
TOTAL	.0% 0	100.0% 18	100.0% 12	100.0% 5	100.0% 1	100.0% 1	100.0% 71	.0% 0	100.0% 108

Table B-9b

CHEMICAL ENGINEERING GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1992, ETHNICITY, and DEGREE
1992 Starting Salary Survey

	Race								TOTAL
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Pursue Advanced Studies in Fall 1992									
Bachelors									
Yes, full-time	20.0% 1	48.0% 12	38.5% 5	23.1% 6	17.6% 3	13.6% 3	21.2% 134	33.3% 2	22.3% 166
Yes, part-time	.0% 0	4.0% 1	15.4% 2	19.2% 5	11.8% 2	4.5% 1	7.3% 46	16.7% 1	7.8% 58
No	80.0% 4	48.0% 12	46.2% 6	57.7% 15	70.6% 12	81.8% 18	71.5% 451	50.0% 3	69.9% 521
TOTAL	100.0% 5	100.0% 25	100.0% 13	100.0% 26	100.0% 17	100.0% 22	100.0% 631	100.0% 6	100.0% 745
Masters									
Yes, full-time	.0% 0	61.1% 11	55.6% 5	56.3% 9	100.0% 1	66.7% 2	38.5% 30	.0% 0	45.7% 58
Yes, part-time	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	33.3% 1	7.7% 6	.0% 0	5.5% 7
No	.0% 0	38.9% 7	44.4% 4	43.8% 7	.0% 0	.0% 0	53.8% 42	100.0% 2	48.8% 62
TOTAL	.0% 0	100.0% 18	100.0% 9	100.0% 16	100.0% 1	100.0% 3	100.0% 78	100.0% 2	100.0% 127

Table B-9b (Continued)

CHEMICAL ENGINEERING GRADUATES
by PLANS FOR FURTHER STUDIES IN FALL 1992, ETHNICITY, and DEGREE
1992 Starting Salary Survey

	Race								TOTAL
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Pursue Advanced Studies in Fall 1992									
Doctorate									
Yes, full-time	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	2.8% 2	.0% 0	1.9% 2
Yes, part-time	.0% 0	12.5% 2	.0% 0	.0% 0	.0% 0	.0% 0	1.4% 1	.0% 0	2.9% 3
No	.0% 0	87.5% 14	100.0% 10	100.0% 5	100.0% 1	100.0% 1	95.8% 68	.0% 0	95.2% 99
TOTAL	.0% 0	100.0% 16	100.0% 10	100.0% 5	100.0% 1	100.0% 1	100.0% 71	.0% 0	100.0% 104

Table C-1

CHEMISTRY GRADUATES WHO PLAN PART-TIME STUDIES IN FALL 1992
by FIELD OF ADVANCED STUDY, DEGREE, and SEX
1992 Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	TOTAL	Male	Female	TOTAL	Male	Female	TOTAL
Field of Further Studies									
Chemistry	39.8% 43	26.7% 24	33.8% 67	63.6% 7	35.7% 5	48.0% 12	20.0% 1	.0% 0	11.1% 1
Other phys sci	8.3% 9	3.3% 3	6.1% 12	9.1% 1	14.3% 2	12.0% 3	20.0% 1	25.0% 1	22.2% 2
Chem or biochem eng	4.6% 5	3.3% 3	4.0% 8	9.1% 1	7.1% 1	8.0% 2	.0% 0	.0% 0	.0% 0
Other eng	.9% 1	3.3% 3	2.0% 4	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Biochemistry	11.1% 12	12.2% 11	11.6% 23	.0% 0	7.1% 1	4.0% 1	40.0% 2	25.0% 1	33.3% 3
Life science	5.6% 6	11.1% 10	8.1% 16	.0% 0	7.1% 1	4.0% 1	.0% 0	.0% 0	.0% 0
Medicine	2.8% 3	2.2% 2	2.5% 5	.0% 0	7.1% 1	4.0% 1	.0% 0	.0% 0	.0% 0
Dentistry	.9% 1	.0% 0	.5% 1	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Pharmacy	2.8% 3	3.3% 3	3.0% 6	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Business	8.3% 9	11.1% 10	9.6% 19	18.2% 2	21.4% 3	20.0% 5	.0% 0	50.0% 2	22.2% 2
Education	3.7% 4	8.9% 8	6.1% 12	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Law	.9% 1	.0% 0	.5% 1	.0% 0	.0% 0	.0% 0	20.0% 1	.0% 0	11.1% 1
Other	10.2% 11	14.4% 13	12.1% 24	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
TOTAL	100.0% 108	100.0% 90	100.0% 198	100.0% 11	100.0% 14	100.0% 25	100.0% 5	100.0% 4	100.0% 9

Table C-2

BS CHEMISTRY GRADUATES WHO PLAN PART-TIME STUDIES IN FALL 1992
by FIELD OF ADVANCED STUDY and CERTIFICATION
1992 Starting Salary Survey

	CURRICULUM APPROVED?		TOTAL
	No	Yes	
Field of Further Studies			
Chemistry	26.4% 34	47.8% 33	33.8% 67
Other phys sci	5.4% 7	7.2% 5	6.1% 12
Chem or biochem eng	1.6% 2	8.7% 6	4.0% 8
Other eng	.8% 1	4.3% 3	2.0% 4
Biochemistry	13.2% 17	8.7% 6	11.6% 23
Life science	10.1% 13	4.3% 3	8.1% 16
Medicine	3.9% 5	.0% 0	2.5% 5
Dentistry	.8% 1	.0% 0	.5% 1
Pharmacy	4.7% 6	.0% 0	3.0% 6
Business	11.6% 15	5.8% 4	9.6% 19
Education	8.5% 11	1.4% 1	6.1% 12
Law	.8% 1	.0% 0	.5% 1
Other	12.4% 16	11.6% 8	12.1% 24
TOTAL	100.0% 129	100.0% 69	100.0% 198

Table C-3

CHEMICAL ENGINEERING GRADUATES WHO PLAN PART-TIME STUDIES IN FALL 1992
by FIELD OF ADVANCED STUDY, SEX, and DEGREE
1992 Starting Salary Survey

	Bachelors			Masters		
	Male	Female	TOTAL	Male	Female	TOTAL
Field of Further Studies						
Chemistry	.0% 0	10.5% 2	3.4% 2	.0% 0	.0% 0	.0% 0
Other phys sci	2.6% 1	.0% 0	1.7% 1	.0% 0	.0% 0	.0% 0
Chem or biochem eng	46.2% 18	26.3% 5	39.7% 23	33.3% 2	100.0% 1	42.9% 3
Other eng	15.4% 6	5.3% 1	12.1% 7	.0% 0	.0% 0	.0% 0
Medicine	2.6% 1	.0% 0	1.7% 1	.0% 0	.0% 0	.0% 0
Business	30.8% 12	31.6% 6	31.0% 18	50.0% 3	.0% 0	42.9% 3
Education	.0% 0	5.3% 1	1.7% 1	.0% 0	.0% 0	.0% 0
Law	.0% 0	5.3% 1	1.7% 1	.0% 0	.0% 0	.0% 0
Other	2.6% 1	15.8% 3	6.9% 4	16.7% 1	.0% 0	14.3% 1
TOTAL	100.0% 39	100.0% 19	100.0% 58	100.0% 6	100.0% 1	100.0% 7

Table C-4

CHEMISTRY GRADUATES WHO PLAN FULL-TIME STUDIES IN FALL 1992
by FIELD OF ADVANCED STUDY, DEGREE, and SEX
1992 Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Field of Further Studies									
Chemistry	47.5% 419	42.8% 245	45.6% 664	83.7% 82	74.5% 35	80.7% 117	68.1% 32	50.0% 7	63.9% 39
Other phys sci	.9% 8	1.9% 11	1.3% 19	1.0% 1	.0% 0	.7% 1	.0% 0	.0% 0	.0% 0
Chem or biochem eng	1.4% 12	1.0% 6	1.2% 18	1.0% 1	2.1% 1	1.4% 2	2.1% 1	.0% 0	1.6% 1
Other eng	1.0% 9	.5% 3	.8% 12	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Biochemistry	8.3% 73	10.1% 58	9.0% 131	4.1% 4	12.8% 6	6.9% 10	19.1% 9	21.4% 3	19.7% 12
Life science	2.8% 25	1.6% 9	2.3% 34	2.0% 2	.0% 0	1.4% 2	.0% 0	7.1% 1	1.6% 1
Medicine	26.9% 237	26.7% 153	26.8% 390	1.0% 1	6.4% 3	2.8% 4	4.3% 2	14.3% 2	6.6% 4
Dentistry	3.2% 28	2.3% 13	2.8% 41	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Pharmacy	2.0% 18	4.0% 23	2.8% 41	3.1% 3	.0% 0	2.1% 3	4.3% 2	7.1% 1	4.9% 3
Business	.6% 5	.3% 2	.5% 7	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Education	.9% 8	2.3% 13	1.4% 21	1.0% 1	2.1% 1	1.4% 2	.0% 0	.0% 0	.0% 0
Law	1.0% 9	.7% 4	.9% 13	.0% 0	2.1% 1	.7% 1	.0% 0	.0% 0	.0% 0
Other	3.5% 31	5.8% 33	4.4% 64	3.1% 3	.0% 0	2.1% 3	2.1% 1	.0% 0	1.6% 1
Total	100.0% 882	100.0% 573	100.0% 1455	100.0% 98	100.0% 47	100.0% 145	100.0% 47	100.0% 14	100.0% 61

Table C-5

BS CHEMISTRY GRADUATES WHO PLAN FULL-TIME STUDIES IN FALL 1992
by FIELD OF ADVANCED STUDY and CERTIFICATION
1992 Starting Salary Survey

	CURRICULUM APPROVED?		Total
	No	Yes	
Field of Further Studies			
Chemistry	24.1% 182	68.7% 482	45.6% 664
Other phys sci	1.5% 11	1.1% 8	1.3% 19
Chem or biochem eng	.8% 6	1.7% 12	1.2% 18
Other eng	1.1% 8	.6% 4	.8% 12
Biochemistry	9.7% 73	8.3% 58	9.0% 131
Life science	4.2% 32	.3% 2	2.3% 34
Medicine	40.1% 303	12.5% 88	26.8% 391
Dentistry	4.6% 35	.9% 6	2.8% 41
Pharmacy	3.7% 28	1.9% 13	2.8% 41
Business	.5% 4	.4% 3	.5% 7
Education	1.7% 13	1.1% 8	1.4% 21
Law	1.3% 10	.4% 3	.9% 13
Other	6.6% 50	2.1% 15	4.5% 65
Total	100.0% 755	100.0% 702	100.0% 1457

Table C-6

CHEMICAL ENGINEERING GRADUATES WHO PLAN FULL-TIME STUDIES IN FALL 1992
by FIELD OF ADVANCED STUDY, SEX, and DEGREE
1992 Starting Salary Survey

	Bachelors			Masters		
	Male	Female	Total	Male	Female	Total
Field of Further Studies						
Chemistry	1.6% 2	2.2% 1	1.8% 3	2.4% 1	6.7% 1	3.6% 2
Chem or biochem eng	78.0% 96	62.2% 28	73.8% 124	90.2% 37	80.0% 12	87.5% 49
Other eng	3.3% 4	13.3% 6	6.0% 10	4.9% 2	6.7% 1	5.4% 3
Biochemistry	.0% 0	2.2% 1	.6% 1	.0% 0	.0% 0	.0% 0
Life science	.0% 0	2.2% 1	.6% 1	.0% 0	.0% 0	.0% 0
Medicine	11.4% 14	8.9% 4	10.7% 18	.0% 0	.0% 0	.0% 0
Dentistry	.8% 1	.0% 0	.6% 1	.0% 0	.0% 0	.0% 0
Pharmacy	.0% 0	.0% 0	.0% 0	2.4% 1	.0% 0	1.8% 1
Business	.0% 0	.0% 0	.0% 0	.0% 0	6.7% 1	1.8% 1
Law	1.6% 2	6.7% 3	3.0% 5	.0% 0	.0% 0	.0% 0
Other	3.3% 4	2.2% 1	3.0% 5	.0% 0	.0% 0	.0% 0
Total	100.0% 123	100.0% 45	100.0% 168	100.0% 41	100.0% 15	100.0% 56

Table C-7

BS CHEMISTRY GRADUATES WHO ARE NOT EMPLOYED and NOT SEEKING EMPLOYMENT
by SEX and PLANS FOR FURTHER STUDIES
1992 Starting Salary Survey

	Sex		Total
	Male	Female	
Pursue Advanced Studies in Fall 1992			
Yes, full-time	88.1% 89	81.4% 57	85.4% 146
Yes, part-time	4.0% 4	4.3% 3	4.1% 7
No	7.9% 8	14.3% 10	10.5% 18
Total	100.0% 101	100.0% 70	100.0% 171

Table C-8

BS CHEMICAL ENGINEERING GRADUATES
WHO ARE NOT EMPLOYED and NOT SEEKING EMPLOYMENT
by SEX and PLANS FOR FURTHER STUDIES
1992 Starting Salary Survey

	Sex		Total
	Male	Female	
Pursue Advanced Studies in Fall 1992			
Yes, full-time	100.0% 10	50.0% 4	77.8% 14
No	.0% 0	50.0% 4	22.2% 4
Total	100.0% 10	100.0% 8	100.0% 18

Table D-1

BS CHEMISTRY AND CHEMICAL ENGINEERING GRADUATES
by AGE and SEX
1992 Starting Salary Survey

	FIELD					
	CHEMICAL ENGINEERING			CHEMISTRY		
	Male	Female	Total	Male	Female	Total
AGE						
20 OR UNDER	.0% 0	.0% 0	.0% 0	.6% 9	1.5% 17	1.0% 26
21	11.3% 53	14.4% 40	12.4% 93	11.8% 179	15.9% 182	13.6% 361
22	38.7% 182	41.7% 116	39.8% 298	44.5% 673	46.2% 528	45.2% 1201
23	32.1% 151	30.6% 85	31.6% 236	18.1% 274	17.4% 199	17.8% 473
24	7.0% 33	6.5% 18	6.8% 51	7.1% 108	5.6% 64	6.5% 172
25	3.8% 18	1.8% 5	3.1% 23	4.4% 66	2.8% 32	3.7% 98
26	1.7% 8	1.4% 4	1.6% 12	3.1% 47	1.6% 18	2.4% 65
27	1.9% 9	.4% 1	1.3% 10	1.1% 17	1.6% 18	1.3% 35
28	.2% 1	.0% 0	.1% 1	1.5% 22	1.2% 14	1.4% 36
29	1.1% 5	.4% 1	.8% 6	1.6% 24	.9% 10	1.3% 34
30 to 34	1.1% 5	1.4% 4	1.2% 9	3.2% 48	2.3% 26	2.8% 74
35 to 39	.6% 3	.7% 2	.7% 5	2.0% 30	1.4% 16	1.7% 46
40 to 49	.4% 2	.4% 1	.4% 3	.9% 14	1.7% 20	1.3% 34
50 to 64	.0% 0	.4% 1	.1% 1	.1% 1	.0% 0	.0% 1
Total	100.0% 470	100.0% 278	100.0% 748	100.0% 1512	100.0% 1144	100.0% 2656

Table D-2

MS CHEMISTRY AND CHEMICAL ENGINEERING GRADUATES
by AGE and SEX
1992 Starting Salary Survey

	FIELD					
	CHEMICAL ENGINEERING			CHEMISTRY		
	Male	Female	Total	Male	Female	Total
AGE						
22	2.1% 2	.0% 0	1.6% 2	.5% 1	.0% 0	.3% 1
23	9.3% 9	6.3% 2	8.5% 11	2.9% 6	6.6% 10	4.5% 16
24	12.4% 12	28.1% 9	16.3% 21	7.7% 16	11.3% 17	9.2% 33
25	16.5% 16	15.6% 5	16.3% 21	9.7% 20	15.2% 23	12.0% 43
26	11.3% 11	9.4% 3	10.9% 14	14.0% 29	10.6% 16	12.6% 45
27	14.4% 14	9.4% 3	13.2% 17	16.9% 35	9.9% 15	14.0% 50
28	6.2% 6	3.1% 1	5.4% 7	7.2% 15	8.6% 13	7.8% 28
29	4.1% 4	3.1% 1	3.9% 5	9.7% 20	8.6% 13	9.2% 33
30 to 34	17.5% 17	15.6% 5	17.1% 22	20.8% 43	18.5% 28	19.8% 71
35 to 39	4.1% 4	6.3% 2	4.7% 6	5.3% 11	6.6% 10	5.9% 21
40 to 49	1.0% 1	3.1% 1	1.6% 2	5.3% 11	4.0% 6	4.7% 17
50 to 64	1.0% 1	.0% 0	.8% 1	.0% 0	.0% 0	.0% 0
Total	100.0% 97	100.0% 32	100.0% 129	100.0% 207	100.0% 151	100.0% 358

Table D-3

PhD CHEMISTRY AND CHEMICAL ENGINEERING GRADUATES
by AGE and SEX
1992 Starting Salary Survey

	FIELD					
	CHEMICAL ENGINEERING			CHEMISTRY		
	Male	Female	Total	Male	Female	Total
AGE						
24	.0% 0	.0% 0	.0% 0	.0% 0	1.3% 2	.4% 2
25	.0% 0	.0% 0	.0% 0	.8% 3	1.3% 2	1.0% 5
26	4.3% 4	13.3% 2	5.6% 6	1.9% 7	5.3% 8	2.9% 15
27	10.9% 10	26.7% 4	13.1% 14	13.6% 51	16.6% 25	14.4% 76
28	19.6% 18	20.0% 3	19.6% 21	20.5% 77	19.2% 29	20.2% 106
29	19.6% 18	20.0% 3	19.6% 21	12.0% 45	11.9% 18	12.0% 63
30 to 34	33.7% 31	20.0% 3	31.8% 34	36.0% 135	29.8% 45	34.2% 180
35 to 39	8.7% 8	.0% 0	7.5% 8	10.7% 40	10.6% 16	10.6% 56
40 to 49	2.2% 2	.0% 0	1.9% 2	4.3% 16	4.0% 6	4.2% 22
50 to 64	1.1% 1	.0% 0	.9% 1	.3% 1	.0% 0	.2% 1
Total	100.0% 92	100.0% 15	100.0% 107	100.0% 375	100.0% 151	100.0% 526

Table D-4

CHEMISTRY POSTDOCTORAL RECIPIENTS
by AGE and SEX
1992 Starting Salary Survey

	Male	Female	Total
AGE			
24	.0% 0	3.1% 2	.8% 2
25	.6% 1	.0% 0	.4% 1
26	1.7% 3	4.7% 3	2.5% 6
27	18.3% 32	23.4% 15	19.7% 47
28	21.7% 38	10.9% 7	18.8% 45
29	10.9% 19	15.6% 10	12.1% 29
30 to 34	40.0% 70	28.1% 18	36.8% 88
35 to 39	4.6% 8	10.9% 7	6.3% 15
40 to 49	1.7% 3	3.1% 2	2.1% 5
50 to 64	.6% 1	.0% 0	.4% 1
Total	100.0% 175	100.0% 64	100.0% 239

Table E-1

FULL-TIME EMPLOYED INEXPERIENCED CHEMISTS
by NUMBER OF JOB OFFERS, SEX, and DEGREE
1992 Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Offers of Employment									
1	51.3% 102	38.7% 82	44.8% 184	53.1% 17	36.7% 11	45.2% 28	42.7% 38	35.0% 14	40.3% 52
2	28.6% 57	34.0% 72	31.4% 129	21.9% 7	46.7% 14	33.9% 21	32.6% 29	25.0% 10	30.2% 39
3	13.1% 26	20.3% 43	16.8% 69	12.5% 4	13.3% 4	12.9% 8	16.9% 15	27.5% 11	20.2% 26
4	4.0% 8	3.8% 8	3.9% 16	9.4% 3	3.3% 1	6.5% 4	6.7% 6	5.0% 2	6.2% 8
5	1.5% 3	2.4% 5	1.9% 8	3.1% 1	.0% 0	1.6% 1	.0% 0	5.0% 2	1.6% 2
6 or 7	.5% 1	.9% 2	.7% 3	.0% 0	.0% 0	.0% 0	1.1% 1	.0% 0	.8% 1
8 or 9	.5% 1	.0% 0	.2% 1	.0% 0	.0% 0	.0% 0	.0% 0	2.5% 1	.8% 1
10 OR MORE	.5% 1	.0% 0	.2% 1	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Total	100.0% 199	100.0% 212	100.0% 411	100.0% 32	100.0% 30	100.0% 62	100.0% 89	100.0% 40	100.0% 129

Table E-2

FULL-TIME EMPLOYED EXPERIENCED CHEMISTS
by NUMBER OF JOB OFFERS, SEX, and DEGREE
1992 Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Offers of Employment									
1	42.8% 62	41.2% 49	42.0% 111	44.7% 21	32.4% 12	39.3% 33	50.0% 36	54.2% 13	51.0% 49
2	29.0% 42	30.3% 36	29.5% 78	29.8% 14	54.1% 20	40.5% 34	29.2% 21	12.5% 3	25.0% 24
3	17.2% 25	17.6% 21	17.4% 46	8.5% 4	13.5% 5	10.7% 9	12.5% 9	25.0% 6	15.6% 15
4	5.5% 8	6.7% 8	6.1% 16	6.4% 3	.0% 0	3.6% 3	2.8% 2	8.3% 2	4.2% 4
5	2.1% 3	3.4% 4	2.7% 7	10.6% 5	.0% 0	6.0% 5	5.6% 4	.0% 0	4.2% 4
6 or 7	2.1% 3	.8% 1	1.5% 4	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
8 or 9	.7% 1	.0% 0	.4% 1	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
10 OR MORE	.7% 1	.0% 0	.4% 1	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Total	100.0% 145	100.0% 119	100.0% 264	100.0% 47	100.0% 37	100.0% 84	100.0% 72	100.0% 24	100.0% 96

Table E-3

FULL-TIME EMPLOYED INEXPERIENCED CHEMICAL ENGINEERS
by NUMBER OF JOB OFFERS, SEX, and DEGREE
1992 Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Offers of Employment									
1	42.6% 75	30.7% 39	37.6% 114	57.9% 11	.0% 0	47.8% 11	42.9% 18	27.3% 3	39.6% 21
2	26.7% 47	27.6% 35	27.1% 82	10.5% 2	50.0% 2	17.4% 4	19.0% 8	18.2% 2	18.9% 10
3	16.5% 29	17.3% 22	16.8% 51	15.8% 3	50.0% 2	21.7% 5	26.2% 11	9.1% 1	22.6% 12
4	5.1% 9	12.6% 16	8.3% 25	10.5% 2	.0% 0	8.7% 2	4.8% 2	27.3% 3	9.4% 5
5	4.0% 7	6.3% 8	5.0% 15	.0% 0	.0% 0	.0% 0	4.8% 2	9.1% 1	5.7% 3
6 or 7	2.8% 5	3.9% 5	3.3% 10	5.3% 1	.0% 0	4.3% 1	.0% 0	.0% 0	.0% 0
8 or 9	1.1% 2	.8% 1	1.0% 3	.0% 0	.0% 0	.0% 0	2.4% 1	.0% 0	1.9% 1
10 OR MORE	1.1% 2	.8% 1	1.0% 3	.0% 0	.0% 0	.0% 0	.0% 0	9.1% 1	1.9% 1
Total	100.0% 176	100.0% 127	100.0% 303	100.0% 19	100.0% 4	100.0% 23	100.0% 42	100.0% 11	100.0% 53

Table E-4

FULL-TIME EMPLOYED EXPERIENCED CHEMICAL ENGINEERS
by NUMBER OF JOB OFFERS,SEX, and DEGREE
1992 Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Offers of Employment									
1	31.7% 32	26.0% 20	29.2% 52	45.5% 10	42.9% 3	44.8% 13	24.0% 6	.0% 0	23.1% 6
2	25.7% 26	29.9% 23	27.5% 49	36.4% 8	14.3% 1	31.0% 9	28.0% 7	100.0% 1	30.8% 8
3	17.8% 18	24.7% 19	20.8% 37	9.1% 2	14.3% 1	10.3% 3	4.0% 1	.0% 0	3.8% 1
4	11.9% 12	7.8% 6	10.1% 18	4.5% 1	28.6% 2	10.3% 3	12.0% 3	.0% 0	11.5% 3
5	6.9% 7	7.8% 6	7.3% 13	4.5% 1	.0% 0	3.4% 1	16.0% 4	.0% 0	15.4% 4
6 or 7	4.0% 4	3.9% 3	3.9% 7	.0% 0	.0% 0	.0% 0	12.0% 3	.0% 0	11.5% 3
8 or 9	1.0% 1	.0% 0	.6% 1	.0% 0	.0% 0	.0% 0	4.0% 1	.0% 0	3.8% 1
10 OR MORE	1.0% 1	.0% 0	.6% 1	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Total	100.0% 101	100.0% 77	100.0% 178	100.0% 22	100.0% 7	100.0% 29	100.0% 25	100.0% 1	100.0% 26

Table F-1

CHEMISTRY GRADUATES
by CITIZENSHIP, ETHNICITY, and DEGREE
1992 Starting Salary Survey

	Race								Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Citizenship									
BS									
US Native	100.0% 18	42.9% 30	35.7% 10	37.4% 43	88.8% 71	76.6% 49	97.3% 2184	66.7% 16	91.6% 2421
US Naturalized	.0% 0	32.9% 23	39.3% 11	44.3% 51	3.8% 3	14.1% 9	1.3% 29	20.8% 5	5.0% 131
US Permanent Res Visa	.0% 0	11.4% 8	17.9% 5	16.5% 19	7.5% 6	7.8% 5	1.3% 29	12.5% 3	2.8% 75
Other visa	.0% 0	12.9% 9	7.1% 2	1.7% 2	.0% 0	1.6% 1	.1% 3	.0% 0	.6% 17
Total	100.0% .7% 18	100.0% 2.6% 70	100.0% 1.1% 28	100.0% 4.3% 115	100.0% 3.0% 80	100.0% 2.4% 64	100.0% 84.9% 2245	100.0% .9% 24	100.0% 100.0% 2644
MS									
US Native	100.0% 1	4.1% 3	.0% 0	5.3% 1	62.5% 5	60.0% 6	93.7% 222	33.3% 1	66.4% 239
US Naturalized	.0% 0	2.7% 2	.0% 0	36.8% 7	.0% 0	20.0% 2	2.5% 6	.0% 0	4.7% 17
US Permanent Res Visa	.0% 0	5.4% 4	.0% 0	21.1% 4	25.0% 2	10.0% 1	1.3% 3	.0% 0	3.9% 14
Other visa	.0% 0	87.8% 65	100.0% 8	36.8% 7	12.5% 1	10.0% 1	2.5% 6	66.7% 2	25.0% 90
Total	100.0% .3% 1	100.0% 20.6% 74	100.0% 2.2% 8	100.0% 5.3% 19	100.0% 2.2% 8	100.0% 2.8% 10	100.0% 65.8% 237	100.0% .8% 3	100.0% 100.0% 360

Table F-1 (Continued)

CHEMISTRY GRADUATES
by CITIZENSHIP, ETHNICITY, and DEGREE
1992 Starting Salary Survey

	Race								Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Citizenship									
Ph.D									
US Native	100.0% 1	2.0% 2	4.0% 1	7.1% 2	25.0% 2	76.9% 10	92.3% 324	60.0% 3	65.0% 345
US Naturalized	.0% 0	4.0% 4	.0% 0	14.3% 4	.0% 0	.0% 0	1.1% 4	.0% 0	2.3% 12
US Permanent Res Visa	.0% 0	11.0% 11	16.0% 4	10.7% 3	25.0% 2	7.7% 1	1.7% 6	20.0% 1	5.3% 28
Other visa	.0% 0	83.0% 83	80.0% 20	67.9% 19	50.0% 4	15.4% 2	4.8% 17	20.0% 1	27.5% 146
Total	100.0% .2% 1	100.0% 18.8% 100	100.0% 4.7% 25	100.0% 5.3% 28	100.0% 1.5% 8	100.0% 2.4% 13	100.0% 66.1% 351	100.0% .9% 5	100.0% 100.0% 531

Table F-2

CHEMISTRY GRADUATES
by CITIZENSHIP, SEX, and DEGREE
1992 Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Citizenship									
US Native	91.3% 1386	92.0% 1057	91.6% 2443	68.4% 143	64.5% 100	66.8% 243	64.7% 246	65.4% 100	64.9% 346
US Naturalized	5.4% 82	4.4% 50	4.9% 132	2.9% 6	7.1% 11	4.7% 17	2.1% 8	2.6% 4	2.3% 12
US Permanent Res Visa	2.6% 39	3.1% 36	2.8% 75	3.3% 7	5.2% 8	4.1% 15	2.9% 11	11.1% 17	5.3% 28
Other visa	.7% 11	.5% 6	.6% 17	25.4% 53	23.2% 36	24.5% 89	30.3% 115	20.9% 32	27.6% 147
Total	100.0% 1518	100.0% 1149	100.0% 2667	100.0% 209	100.0% 155	100.0% 364	100.0% 380	100.0% 153	100.0% 533

Table F-3

MINORITY CHEMISTRY GRADUATES
by MINORITY CLASSIFICATION, SEX, AND DEGREE
1992 Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
MINORITY CLASSIFICATION									
American Indian	5.8% 12	3.1% 6	4.5% 18	.0% 0	1.7% 1	.8% 1	.8% 1	.0% 0	.6% 1
Chinese	19.9% 41	15.1% 29	17.6% 70	60.3% 38	61.0% 36	60.7% 74	56.1% 69	54.4% 31	55.6% 100
Subcont Indian	6.8% 14	7.3% 14	7.0% 28	11.1% 7	1.7% 1	6.6% 8	16.3% 20	8.8% 5	13.9% 25
Other Asian	32.0% 66	25.5% 49	28.9% 115	9.5% 6	20.3% 12	14.8% 18	15.4% 19	15.8% 9	15.6% 28
Black	15.0% 31	25.5% 49	20.1% 80	7.9% 5	5.1% 3	6.6% 8	4.9% 6	3.5% 2	4.4% 8
Hispanic	16.0% 33	15.6% 30	15.8% 63	6.3% 4	10.2% 6	8.2% 10	4.1% 5	14.0% 8	7.2% 13
Other	4.4% 9	7.8% 15	6.0% 24	4.8% 3	.0% 0	2.5% 3	2.4% 3	3.5% 2	2.8% 5
Total	100.0% 206	100.0% 192	100.0% 398	100.0% 63	100.0% 59	100.0% 122	100.0% 123	100.0% 57	100.0% 180

Table F-4

CHEMICAL ENGINEERING GRADUATES
by CITIZENSHIP, ETHNICITY, and DEGREE
1992 Starting Salary Survey

Bachelors

	MINORITY CLASSIFICATION								Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Citizenship									
US Native	100.0% 5	53.8% 14	46.2% 6	34.6% 9	94.1% 16	81.8% 18	97.3% 616	50.0% 3	91.8% 687
US Naturalized	.0% 0	38.5% 10	38.5% 5	42.3% 11	.0% 0	4.5% 1	1.4% 9	50.0% 3	5.2% 39
US Permanent Res Visa	.0% 0	.0% 0	7.7% 1	15.4% 4	5.9% 1	9.1% 2	.9% 6	.0% 0	1.9% 14
Other visa	.0% 0	7.7% 2	7.7% 1	7.7% 2	.0% 0	4.5% 1	.3% 2	.0% 0	1.1% 8
Total	100.0% .7% 5	100.0% 3.5% 26	100.0% 1.7% 13	100.0% 3.5% 26	100.0% 2.3% 17	100.0% 2.9% 22	100.0% 84.6% 633	100.0% .8% 6	100.0% 100.0% 748

Table F-4 (Continued)

CHEMICAL ENGINEERING GRADUATES
by CITIZENSHIP, ETHNICITY, and DEGREE
1992 Starting Salary Survey

Masters

	MINORITY CLASSIFICATION								Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Citizenship									
US Naturalized	.0% 0	5.0% 1	.0% 0	12.5% 2	.0% 0	.0% 0	.0% 0	.0% 0	2.3% 3
US Permanent Res Visa	.0% 0	10.0% 2	.0% 0	12.5% 2	.0% 0	33.3% 1	2.5% 2	.0% 0	5.3% 7
Other visa	.0% 0	80.0% 16	100.0% 9	62.5% 10	.0% 0	.0% 0	10.0% 8	50.0% 1	33.6% 44
Total	.0% .0% 0	100.0% 15.3% 20	100.0% 6.9% 9	100.0% 12.2% 16	100.0% .8% 1	100.0% 2.3% 3	100.0% 61.1% 80	100.0% 1.5% 2	100.0% 100.0% 131

Table F-4 (Continued)

CHEMICAL ENGINEERING GRADUATES
by CITIZENSHIP, ETHNICITY, and DEGREE
1992 Starting Salary Survey

Doctorate

	MINORITY CLASSIFICATION								Total
	Amer Indian	Chinese	Subcont Indian	Other Asian	Black	Hisp	White	Other	
Citizenship									
US Native	.0% 0	10.5% 2	8.3% 1	.0% 0	.0% 0	.0% 0	87.3% 62	.0% 0	59.6% 65
US Naturalized	.0% 0	15.8% 3	.0% 0	.0% 0	.0% 0	.0% 0	1.4% 1	.0% 0	3.7% 4
US Permanent Res Visa	.0% 0	10.5% 2	8.3% 1	20.0% 1	100.0% 1	.0% 0	7.0% 5	.0% 0	9.2% 10
Other visa	.0% 0	63.2% 12	83.3% 10	80.0% 4	.0% 0	100.0% 1	4.2% 3	.0% 0	27.5% 30
Total	.0% .0% 0	100.0% 17.4% 19	100.0% 11.0% 12	100.0% 4.6% 5	100.0% .9% 1	100.0% .9% 1	100.0% 65.1% 71	.0% .0% 0	100.0% 100.0% 109

Table F-5

CHEMICAL ENGINEERING GRADUATES
by CITIZENSHIP, SEX, and DEGREE
1992 Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Citizenship									
US Native	93.0% 440	90.0% 251	91.9% 691	60.2% 59	56.3% 18	59.2% 77	60.2% 56	62.5% 10	60.6% 66
US Naturalized	4.2% 20	6.8% 19	5.2% 39	3.1% 3	.0% 0	2.3% 3	2.2% 2	12.5% 2	3.7% 4
US Permanent Res Visa	1.9% 9	1.8% 5	1.9% 14	5.1% 5	6.3% 2	5.4% 7	7.5% 7	18.8% 3	9.2% 10
Other visa	.8% 4	1.4% 4	1.1% 8	31.6% 31	37.5% 12	33.1% 43	30.1% 28	6.3% 1	26.6% 29
Total	100.0% 473	100.0% 279	100.0% 752	100.0% 98	100.0% 32	100.0% 130	100.0% 93	100.0% 16	100.0% 109

Table F-6

MINORITY CHEMICAL ENGINEERING GRADUATES
by MINORITY CLASSIFICATION, SEX, AND DEGREE
1992 Starting Salary Survey

	Bachelors			Masters			Doctorate		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Race									
American Indian	6.3% 4	1.9% 1	4.3% 5	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0	.0% 0
Chinese	27.0% 17	17.3% 9	22.6% 26	42.1% 16	33.3% 4	40.0% 20	46.9% 15	80.0% 4	51.4% 19
Subcont Indian	11.1% 7	11.5% 6	11.3% 13	18.4% 7	8.3% 1	16.0% 8	34.4% 11	.0% 0	29.7% 11
Other Asian	20.6% 13	25.0% 13	22.6% 26	34.2% 13	25.0% 3	32.0% 16	12.5% 4	20.0% 1	13.5% 5
Black	9.5% 6	21.2% 11	14.8% 17	.0% 0	8.3% 1	2.0% 1	3.1% 1	.0% 0	2.7% 1
Hispanic	17.5% 11	21.2% 11	19.1% 22	2.6% 1	16.7% 2	6.0% 3	3.1% 1	.0% 0	2.7% 1
Other	7.9% 5	1.9% 1	5.2% 6	2.6% 1	8.3% 1	4.0% 2	.0% 0	.0% 0	.0% 0
Total	100.0% 63	100.0% 52	100.0% 115	100.0% 38	100.0% 12	100.0% 50	100.0% 32	100.0% 5	100.0% 37

American Chemical Society

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

JOHN K CRUM
Executive Director

Summer 1992

Dear Colleague:

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

I urge you, as a service to your colleagues and profession, to respond to this year's questionnaire. The procedure is *confidential.* The information you provide will be combined with returns from other graduates so that only aggregated 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. Results of the survey will be published in the *Chemical and 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

Enclosure

AMERICAN CHEMICAL SOCIETY
Survey of Starting Salaries and Employment Status of 1992 Chemistry and Chemical Engineering Graduates

1. Highest degree earned:
- Bachelor's ☐ 1
- Master's ☐ 2
- Doctorate ☐ 3

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

3. Please describe the school that granted your degree:

a. Public ☐ 1
Private ☐ 2

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

c. The highest degree offered by your department is:
- BS ☐ 1
- MS ☐ 2
- PhD ☐ 3

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

___ ___ ___

e. Is the school an historically or predominantly black institution?
- Yes ☐ 1
- No ☐ 2

f. Is the school a traditionally women's institution?
- Yes ☐ 1
- No ☐ 2

4. How would you rate the state of equipment and instrumentation in your chemistry or chemical engineering classes?

a. The type of equipment was:
- Excellent ☐ 1
- Adequate ☐ 2
- Inadequate ☐ 3

b. The access to equipment was:
- Excellent ☐ 1
- Adequate ☐ 2
- Inadequate ☐ 3

c. How up-to-date was the equipment?
- Extremely ☐ 1
- Moderately ☐ 2
- Not at all ☐ 3

5. How would you rate the state of computer equipment and software in your chemistry or chemical engineering classes?

a. The type of computer equipment was:
- Excellent ☐ 1
- Adequate ☐ 2
- Inadequate ☐ 3

b. The type of computer software was:
- Excellent ☐ 1
- Adequate ☐ 2
- Inadequate ☐ 3

c. The access to computer equipment was:
- Excellent ☐ 1
- Adequate ☐ 2
- Inadequate ☐ 3

d. How up-to-date was the computer equipment?
- Extremely ☐ 1
- Moderately ☐ 2
- Not at all ☐ 3

IF HIGHEST DEGREE EARNED WAS A MASTER'S OR DOCTORATE, PLEASE SKIP TO QUESTION 9.

6. In your chemistry classes, did you get a chance to:

a. Work in teams?
- Yes ☐ 1
- No ☐ 2

b. Work on independent research projects?
- Yes ☐ 1
- No ☐ 2

7. Did you participate in a chemistry or chemical engineering cooperative education program while in college?
- Yes ☐ 1
- No ☐ 2

8. Grade point average:

[Use A = 4.00; B = 3.00; C = 2.00]

In your major _____

Overall _____

9. Will you pursue advanced studies in the fall of 1992?
- Yes, full-time ☐ 1
- Yes, part-time ☐ 2
- No ☐ 3

a. If yes, field of further studies:
- Chemistry ☐ 01
- Other physical science, computer science or math ☐ 02
- Chemical engineering or biochemical engineering ☐ 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

10. Age at last birthday? ____ ____ years old

11. Sex?
- Male ☐ 1
- Female ☐ 2

12. Citizen or visa status:
- U.S. native ☐ 1
- U.S. naturalized ☐ 2
- U.S. permanent resident visa ☐ 3
- Other visa ☐ 4

13. Race or ethnic group:
- American Indian or Alaskan Native ☐ 1
- Chinese ☐ 2
- Subcontinental Indian ☐ 3
- Other Asian or Pacific Islander ☐ 4
- Black (not of Hispanic origin) ☐ 5
- Hispanic ☐ 6
- White (not of Hispanic origin) ☐ 7
- Other race or ethnic group ☐ 8

14. 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
- a. If not continuing full-time employment, are you:
  - *seeking* full-time, year-round employment ☐ 1
  - *not seeking* full-time, year-round employment ☐ 2

IF YOU CHECKED BOX 3, 4, OR 5 IN QUESTION 14, PLEASE STOP HERE AND RETURN THE QUESTIONNAIRE IN THE ENVELOPE PROVIDED.

15. Your base annual salary from principal job:

$ _____ per year

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

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

Specify number _____

17. 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

18. Check the one specialty most related to your job:
- Chemical engineering ☐ 1
- Chemistry (including biochemistry) ☐ 2
- Other ☐ 3

19. 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

20. If you are employed in private industry, check the one category that best describes the type of industry:
- Nonmanufacturing ☐ 01
- Manufacturing
  - 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

21. Check the one work function that best describes your job:
- Teaching ☐ 1
- Management or administration ☐ 2
- Basic Research ☐ 3
- Applied research/Development/Design ☐ 4
- Production/Quality control ☐ 5
- Other ☐ 6
- a. Is your job classified as a technician position?
  - Yes ☐ 1
  - No ☐ 2

22. 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

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

____ ____ ____

Comments:

THANK YOU FOR YOUR PARTICIPATION

PLEASE RETURN THIS QUESTIONNAIRE PROMPTLY TO

ACS STARTING SALARY SURVEY
ROOM 440, 1155 16th Street, N.W., Washington, DC 20036

OFFICE OF PROFESSIONAL SERVICES PUBLICATIONS

Workforce Reports: Workforce Reports, which are published three times a year, provide analyses of work force 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.

Suggested Reading List of Job Search Strategies recommends books and other literature covering topics relating to how to find a job including skill identification, resume preparation, cover letters, and interviewing.

Coping with Job Loss describes the trauma of termination and provides information on coping with the emotional, practical, and professional aftermath. Examines the grieving process, reviews sources of help and support, makes recommendations on organizing a job search.

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.

Trade Secrets...Ethics and Law is an effort to familiarize chemists and chemical engineers with the technical maze they may encounter in the trade secrets field. This effort is not regarded as a final authoritative say on the subject; but, rather a guide which will alert scientists and engineers to this complex matter. A supplemental reading list is included.

Employment Agreements describes the salient aspects of employment agreements, or employment contracts, as they are often called. The booklet is not necessarily authoritative, nor is it intended to provide legal advice in interpreting the provisions of a specific contract. However, it is hoped that this information will assist the professional scientist or engineer in understanding such agreements and will thereby foster better working relationships between employer and employee. A recommended reading list is included.

ACS Career, Employment and Professional Resources: A Catalog of Publications, Programs & Services

The Chemist's Creed

For a free copy, please call or write:

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ISBN 0-8412-2630X