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ChemCensus 2010

ACS Department of Member Research & Technology

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American Chemical Society

Acknowledgements

Every fifth year since 1985 the American Chemical Society (ACS) has conducted a census of its members. In previous years, separate reports were issued for the membership at large, industrial chemists, and academic chemists. This report, by contrast, is comprehensive.

This report draws from the ChemCensus2010 survey, as well as results from each of the five previous five-year censuses. It is being issued to provide, in a single document, a summary of the ACS membership in the workforce over the last twenty-five years.

The ACS Committee on Economic and Professional Affairs (CEPA) and its Subcommittee on Surveys planned and provided general oversight of the survey and its analysis.

Gareth Edwards, Senior Research Associate at the American Chemical Society, managed the administration of the 2010 ChemCensus. He updated the instrument, ran the collection effort, and produced the final dataset and tables for this report, with help from the Department of Member Research. The report was prepared by Chamberlain Research Consultants, Inc., Madison, Wisconsin.

Contents

Preface

This report examines data from the American Chemical Society's ChemCensus surveys for the last twenty-five years, beginning in 1985 and conducted every five years, through the most recent survey, ChemCensus2010.

The report is organized into four major parts. The first part concerns all ACS members regardless of employment. This part includes chemists from industry, academia, and government, as well as chemists who identify themselves as being self-employed.

The second part concerns industrial chemists. These are ACS members who describe their principal employer as being in the industrial sector, regardless of the type of industry or chemical specialization.

The third part reports on academic chemists. These are ACS members who describe their principal employer as being an educational institution, regardless of the level of institution, control structure (public or private), or chemical specialization.

The fourth and final part concerns women chemists regardless of employment. These ACS members include women from industry, academia, and government, as well as women who identify themselves as being self-employed.

The Appendix shows the most recent of the five-year surveys: ChemCensus2010.

The 2010 survey included 40,480 member chemists from the 85,625 members in the workforce in March 2010, for a 47.3 percent response rate. Being in the workforce implies that a member is (1) a regular member, (2) under 70 years of age, (3) not retired, (4) not a student, and (5) not emeritus. As the Base Table on the next page shows, the response rate for the 2010 ChemCensus is comparable to response rates from previous survey years.

Industrial chemists responding in 2010, 23,502 of them, represented 58.1 percent of all members responding, the lowest percentage of industrial chemists across the twenty-five year period of surveys. Industrial chemists had represented 68.1 percent of members responding in 1985. Academic chemists, in contrast, have seen a constant pattern of increase as a percentage of members responding, beginning with a low of 23.1 percent in 1985 and increasing from one quinquennial survey to the next. In 2010, with 12,983 academic chemists responding, academic chemists represented 39.8 percent of members responding. Also increasing as a percentage are women chemists. While women represented only 14.9 percent of chemists responding in 1985, their numbers have seen a general increasing pattern over the last twenty-five years. So we see 12,983 women responding in 2010, 32.1 percent of members responding.

Base Table: American Chemical Society Membership and ChemCensus Survey Response 1985–2010

	Year					
ACS Membership and Survey Response	1985	1990	1995	2000	2005	2010
ACS Membership Invited to Respond	86,600	88,810	93,500	94,100	86,600	85,652
Members Responding to ChemCensus	42,613	39,320	50,291	47,831	35,365	40,480
Response Rate Percentage	49.2	42.3	53.8	50.8	40.8	47.3
Industrial Chemists Responding	29,035	25,500	31,290	32,217	23,178	23,502
Industrial Chemists as a Percentage of Members Responding	68.1	64.9	62.2	67.4	65.5	58.1
Academic Chemists Responding	9.857	9,838	13,914	14,313	11,777	16,098
Academic Chemists as a Percentage of Members Responding	23.1	25.0	27.7	29.9	33.3	39.8
Women Chemists Responding	6,337	7,230	11,201	12,857	8,974	12,983
Women Chemists as a Percentage of Members Responding	14.9	18.4	22.3	26.9	25.4	32.1

Note. ACS membership numbers are for March 1 of each year, the reference date for ChemCensus surveys.

All Chemists

This part of the report concerns all chemists responding to the ACS ChemCensus surveys, regardless of their employment status or principal employer. It is divided into three major sections: an overview, review of edcuation of all members, and employment and salaries of all members.

Tables in this first section, which concerns general demographic information for member chemists, are based upon data for all chemists, regardless of their employment situation as of March 1, 2010.

Table A1: All Chemists in Workforce, Employment Status 1985–2010

	Year					
All Chemists (%)	1985	1990	1995	2000	2005	2010
Employed Full-Time (35 hours/week or more)	95.0	95.1	91.3	92.9	90.9	88.3
Employed Part-Time	1.6	1.6	2.7	3.1	4.1	3.9
PostDoctoral/Other Fellowship	1.8	2.1	3.4	2.0	1.9	4.0
Seeking Employment	1.7	1.2	2.6	2.1	3.1	3.8
Total	100	100	100	100	100	100
Number Responding	42,253	38,793	48,515	45,587	33,441	37,335

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable. The percentage of chemists in the workforce and seeking employment is the unemployment rate.

Table A1 shows the employment breakdown of all members responding to the employment status item. Retired members are included in the not-seeking-employment category. The proportion of responding members employed in full-time positions (working 35 hours a week or more) has been declining across the twenty-five-year history of ChemCensus. Consequently, the unemployment rate among chemists has been increasing.

Table A2: All Chemists Demographics (Gender and Age) 1985–2010

		Year					
	All Chemists (%)	1985	1990	1995	2000	2005	2010
Gender	Men	85.4	82.0	78.6	75.7	75.0	71.5
	Women	14.6	18.0	21.4	24.3	25.0	28.5
	Total	100	100	100	100	100	100
	Number Responding	42,473	39,128	49,722	46,214	35,197	38,473
Age	20-29	12.4	14.5	10.5	10.2	5.1	3.5
	30-39	29.6	30.6	30.3	26.1	21.4	20.7
	40-49	26.0	26.8	27.5	28.9	28.4	26.4
	50-59	21.0	19.1	22.8	25.2	28.3	30.2
	60-69	9.8	9.0	8.6	9.3	16.0	18.9
	70 or older	1.2	0	0.3	0.2	0.9	0.4
	Total	100	100	100	100	100	100
	Number Responding	42,613	39,320	50,248	47,831	35,365	37,687

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table A2 shows gender and age category breakdowns for all member chemists. The percentage of women chemists in the organization has been steadily increasing across the years. The age distribution has been trending older, a fact that is further demonstrated by tables A5 and A9 later in the report.

Table A3: All Chemists Demographics (Marriage and Family) 1985–2010

		Year					
	All Chemists (%)	1985	1990	1995	2000	2005	2010
Marital Status	Single	20.1	21.2	21.1	18.9	18.8	18.4
	Married/Partnered	79.9	78.8	78.9	81.1	81.2	81.6
	Total	100	100	100	100	100	100
	Number Responding	42,430	39,063	49,147	47,831	35,107	38,453
	Of All Married/Partnered						
	To Chemist	10.9	12.5	14.0	15.2	15.5	15.3
	To Non-chemist Scientist	13.6	15.1	17.0	19.3	19.4	18.9
	To Non-scientist	75.5	72.5	69.0	65.4	65.1	65.7

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table A4: All Chemists Demographics (Citizenship, Race/Ethnicity) 1985–2010

		Year					
	All Chemists (%)	1985	1990	1995	2000	2005	2010
Citizenship	U.S. Native	87.7	87.5	82.4	79.8	80.4	76.0
	U.S. Naturalized	8.0	7.4	8.6	10.3	10.2	13.1
	Permanent Resident	3.7	3.9	6.9	6.6	6.1	8.0
	Other Visa Status	0.6	1.2	2.1	3.2	3.3	3.0
	Total	100	100	100	100	100	100
	Number Responding	42,563	39,170	49,650	46,256	35,193	38,560
Ethnicity/Race	Hispanic	0.9	1.4	2.2	2.7	2.7	3.3
	Non-hispanic						
	White	91.3	90.4	84.7	83.9	84.2	78.7
	Black/African American	1.1	1.1	1.4	1.8	1.7	2.2
	American Indian	0.1	0.3	0.2	0.2	0.2	0.2
	Asian	5.7	6.2	10.1	10.5	10.4	12.7
	Other or Multiracial	0.8	0.6	1.3	1.0	0.8	3.0
	Total	100	100	100	100	100	100
	Number Responding	42,196	37,548	49,176	42,300	34,823	11,205

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table A5: All Chemists (Age by Gender) 1985–2010

	Year					
Men (%)	1985	1990	1995	2000	2005	2010
20-29	9.7	11.4	7.3	5.1	3.3	2.1
30-39	28.8	29.2	28.0	23.9	18.7	17.9
40-49	26.8	28.0	28.8	30.3	28.0	25.5
50-59	22.7	21.2	25.5	29.1	30.8	31.7
60-69	10.9	10.2	10.1	11.3	18.6	22.3
70 or older	1.1	0	0.3	0.2	0.6	0.5
Total	100	100	100	100	100	100
Number Responding	36,276	32,090	39,055	34,974	26,391	26,903

Women (%)	1985	1990	1995	2000	2005	2010
20-29	28.3	27.1	18.7	14.4	10.6	6.8
30-39	34.2	37.8	40.0	36.3	29.7	27.8
40-49	21.4	21.5	24.1	28.5	29.8	28.5
50-59	10.8	9.9	13.7	16.4	20.9	26.4
60-69	4.0	3.7	3.4	4.2	8.2	10.4
70 or older	1.3	0	0.2	0.1	0.7	0.2
Total	100	100	100	100	100	100
Number Responding	6,197	7,038	10,625	11,240	8,806	10,616

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

As noted earlier, the age distribution has been trending older, a fact that is further demonstrated by table A5, which shows age distributions by gender, and table A9, which shows mean ages of all member chemists, as well as mean ages of chemists by demographic group.

Table A6: All Chemists (Citizenship by Gender) 1985–2010

	Year					
Men (%)	1985	1990	1995	2000	2005	2010
U.S. Native	87.7	87.3	82.5	80.2	80.4	75.8
U.S. Naturalized	7.8	7.3	8.5	9.9	10.1	12.9
Permanent Resident	3.8	4.1	7.0	6.7	6.2	8.3
Other Visa Status	0.6	1.3	2.0	3.2	3.2	3.0
Total	100	100	100	100	100	100
Number Responding	36,240	32,069	38,874	34,899	26,322	27,397

Women (%)	1985	1990	1995	2000	2005	2010
U.S. Native	88.2	88.8	82.2	78.8	80.4	76.4
U.S. Naturalized	8.6	7.4	9.1	11.4	10.4	13.6
Permanent Resident	2.7	2.9	6.5	6.5	5.9	7.3
Other Visa Status	0.4	0.9	2.2	3.3	3.4	2.7
Total	100	100	100	100	100	100
Number Responding	6,190	7,036	10,580	11,208	8,781	10,939

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table A6 shows a decline in U.S. native-born citizens as a percentage of all members. Permanent resident and other visa status categories have increased relative to U.S. native-born citizens. These, too, are twenty-five year trends.

Table A7: All Chemists (Ethnicity by Gender) 1985–2010

	Year					
Men (%)	1985	1990	1995	2000	2005	2010
Hispanic	0.8	1.3	2.0	2.3	2.4	2.9
Non-hispanic						
White	91.6	90.7	85.4	84.9	84.9	79.0
Black/African American	1.0	1.0	1.1	1.5	1.5	1.9
American Indian	0.2	0.3	0.2	0.1	0.2	0.2
Asian	5.6	6.2	9.9	10.0	10.2	12.9
Other	0.8	0.6	1.4	1.1	0.8	1.2
Multiracial	—	—	—	—	—	1.9
Total	100	100	100	100	100	100
Number Responding	35,919	30,707	38,470	31,828	26,036	26,877

Women (%)	1985	1990	1995	2000	2005	2010
Hispanic	1.2	2.1	3.0	3.7	3.5	4.3
Non-hispanic						
White	89.9	88.9	82.4	81.0	82.4	77.8
Black/African American	1.8	1.9	2.2	2.6	2.4	3.0
American Indian	0.1	0.5	0.2	0.2	0.2	0.2
Asian	6.4	6.2	11.0	11.7	10.9	12.1
Other	0.7	0.5	1.2	0.7	0.6	0.8
Multiracial	—	—	—	—	—	1.8
Total	100	100	100	100	100	100
Number Responding	6,158	6,785	10,534	10,369	8,721	10,803

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table A7 shows trends in ethnicity across the ChemCensus years. The most telling trend is in the percentage of member chemists identifying themselves as having Asian descent. Black/African American chemists continue to be in the minority, with only 1.9 percent of men and 3.0 percent of women identifying themselves as being Black/African American in 2010. As with the U.S. population generally, Hispanics are increasing as a percentage of membership, but these percentages remain low, with only 2.9 percent of men identifying themselves as being Hispanic and only 4.3 percent of women in 2010. The multiracial category was introduced in 2010, making precise twenty-five-year comparisons across race and ethnicity difficult.

Table A8: All Chemists (Marriage and Family by Gender) 1985–2010

		Year					
	Men (%)	1985	1990	1995	2000	2005	2010
Marital Status	Single	16.5	17.6	17.7	16.0	15.4	14.8
	Married/Partnered	83.5	82.4	82.3	84.0	84.6	85.2
	Total	100	100	100	100	100	100
	Number Responding	36,138	31,993	38,467	34,974	26,262	27,348
	Of All Married/Partnered						
	To Chemist	8.6	9.7	10.8	11.8	12.3	12.3
	To Non-chemist Scientist	11.9	13.1	14.6	17.0	17.2	16.6
	To Non-scientist	79.5	77.2	74.6	71.2	70.5	71.1

	Women (%)	1985	1990	1995	2000	2005	2010
Marital Status	Single	40.7	37.8	33.4	30.5	28.9	27.5
	Married/Partnered	59.3	62.2	66.6	69.5	71.1	72.5
	Total	100	100	100	100	100	100
	Number Responding	6,169	7,013	10,507	11,240	8,766	10,895
	Of All Married/Partnered						
	To Chemist	30.3	29.4	28.4	28.0	27.1	24.3
	To Non-chemist Scientist	28.0	26.9	28.0	28.2	27.1	25.6
	To Non-scientist	41.7	43.7	43.6	43.8	45.7	50.1

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table A8 shows all member chemists broken down by marital status. Reporting members identifying themselves as being married/partners have increased over the years for both men and women. This could be explained by the fact that mean ages have increased over the same period of time.

Table A9: All Chemists, Full-Time Workers Mean Age by Demographic Group 1985–2010

		Year					
	Academic Full-time Worker (Mean Age)	1985	1990	1995	2000	2005	2010
Gender	All Chemists	43.7	41.7	43.1	43.8	47.7	48.8
	Men	44.7	42.9	44.7	46.4	49.0	50.2
	Women	38.1	36.4	38.7	40.4	43.4	45.2
Ethnicity	Hispanic	40.0	38.7	40.3	42.1	44.4	45.6
	Non-hispanic						
	White	43.9	42.0	43.9	45.2	48.0	49.4
	Black/African American	42.9	39.1	41.0	42.3	46.1	46.7
	American Indian	40.1	40.0	41.8	43.8	49.2	45.5
	Asian	42.5	40.0	40.9	42.5	44.6	45.5
	Other	41.1	38.9	40.9	44.6	47.1	50.7
	Multiracial	—	—	—	—	—	48.2
Citizenship	U.S. Native	43.5	41.7	43.6	45.2	48.1	49.3
	U.S. Naturalized	48.7	46.1	48.0	48.5	50.9	51.4
	Permanent Resident	40.5	39.1	39.2	41.1	42.2	43.2
	Other Visa Status	34.3	32.7	32.9	35.0	36.2	36.8
Highest Degree	Associate Degree	—	—	43.4	43.7	50.1	50.5
	Bachelor's Degree	41.2	38.3	39.4	40.0	44.2	46.0
	Master's Degree	43.6	41.6	43.2	43.6	48.3	49.6
	Doctorate	44.9	43.1	45.0	45.3	48.7	49.2
	Other Professional Degree	46.3	46.6	44.4	46.9	49.4	51.5

Note. A long dash within a cell indicates that summary data are unavailable.

All Chemists: Education

Tables in this section, which present information about chemists' education, are based upon data for all member chemists, regardless of their employment situation as of March 1, 2010.

Table A10: All Chemists Education (Highest Degree Received) 1985–2010

	Year					
All Chemists (%)	1985	1990	1995	2000	2005	2010
Associate Degree	—	—	0.4	0.4	0.4	0.3
Bachelor's Degree	25.8	24.6	23.5	22.0	19.8	17.5
Master's Degree	19.2	18.8	18.5	18.6	18.2	17.7
Doctorate	54.4	56.2	57.0	58.1	61.0	63.5
Other	0.7	0.4	0.5	0.8	0.7	1.0
Total	100	100	100	100	100	100
Number Responding	42,613	39,320	49,602	47,831	35,365	39,900

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table A10 provides a summary of highest degrees earned by member chemists responding the the ChemCensus surveys. Here we see an increase in the percentage of members having doctoral degrees from one quinquennial survey to the next. Among responding members in 1985, only 54.4 percent possessed doctoral degrees. By 2010, that percentage had increased to 63.5 percent.

Table A11: All Chemists (Highest Degree by Gender) 1985–2010

	Year					
Men (%)	1985	1990	1995	2000	2005	2010
Associate Degree	—	—	0.4	0.4	0.4	0.3
Bachelor's Degree	23.8	22.1	20.8	19.3	17.8	15.7
Master's Degree	18.0	17.3	16.8	16.7	16.2	15.5
Doctorate	57.6	60.2	61.5	62.8	65.0	67.5
Other	0.6	0.4	0.5	0.8	0.6	1.1
Total	100	100	100	100	100	100
Number Responding	36,276	32,090	8,792	34,974	26,391	27,461

Women (%)	1985	1990	1995	2000	2005	2010
Associate Degree	—	—	0.6	0.6	0.5	0.4
Bachelor's Degree	37.2	36.0	33.6	30.6	25.9	22.0
Master's Degree	26.4	25.3	24.5	24.3	24.1	23.1
Doctorate	35.5	38.2	40.7	43.8	48.8	53.6
Other	0.9	0.5	0.6	0.8	0.8	0.8
Total	100	100	100	100	100	100
Number Responding	6,197	7,038	10,554	11,240	8,806	10,960

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

When we look at men and women separately, as shown in Table A11, we see a similar pattern of higher percentages of members holding doctorates. Also evident from these data is the fact that higher percentages of men hold doctorates than women. Among members responding to the 2010 ChemCensus, 67.5 percent of men held doctorates, while 53.6 percent of women held doctorates.

Table A12: All Chemists (Years of Experience) 1985–2010

	Year					
All Chemists (%)	1985	1990	1995	2000	2005	2010
0–1 Years	0.9	0.7	3.7	0.1	0.6	0.5
2–4 Years	4.3	3.9	10.9	3.2	1.8	1.9
5–9 Years	13.5	13.8	16.4	8.6	6.8	5.9
10–14 Years	14.9	16.7	15.2	13.1	11.7	11.9
15–19 Years	14.1	14.4	13.2	15.4	12.1	12.6
20–24 Years	14.2	13.1	12.8	13.9	14.4	12.2
25–29 Years	11.2	13.3	12.7	12.9	14.3	15.1
30–34 Years	11.0	9.7	8.3	12.6	13.7	14.3
35–39 Years	9.9	8.3	6.9	11.7	12.3	12.5
40 Years or More	6.0	6.1	0	8.6	12.3	13.1
Total	100	100	100	100	100	100
Number Responding	42,331	35,770	48,726	47,400	35,238	37,595

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.
Years of experience refers to years since earning a bachelor's degree.

Tables A12 and A13 show years of experience, which is defined as the years since earning a bachelor's degree. Distributional changes for this demographic are consistent with the trend in ages observed earlier.

Table A13: All Chemists (Years of Experience by Gender) 1985–2010

	Year					
Men (%)	1985	1990	1995	2000	2005	2010
0–1 Years	0.6	0.5	2.7	0.1	0.4	0.3
2–4 Years	3.1	2.8	8.8	2.2	1.1	1.2
5–9 Years	11.9	11.4	14.8	6.9	5.2	4.4
10–14 Years	14.4	15.7	14.9	11.6	10.1	10.3
15–19 Years	14.3	14.6	13.7	15.1	11.1	11.7
20–24 Years	14.6	13.8	13.8	14.5	14.1	11.7
25–29 Years	11.8	14.2	14.0	14.3	14.8	15.2
30–34 Years	12.1	10.7	9.4	14.3	14.8	15.3
35–39 Years	10.7	9.5	7.8	12.8	14.1	14.1
40 Years or More	6.5	6.8	0	8.3	14.2	15.8
Total	100	100	100	100	100	100
Number Responding	36,049	29,178	38,206	34,722	26,309	26,101

Women (%)	1985	1990	1995	2000	2005	2010
0–1 Years	3.0	1.7	7.4	0.1	1.4	0.9
2–4 Years	11.2	8.8	19.0	6.9	3.9	3.6
5–9 Years	23.5	24.7	22.3	15.0	11.6	9.8
10–14 Years	17.2	21.2	16.0	19.0	16.5	15.8
15–19 Years	12.8	13.7	11.2	18.1	15.0	14.7
20–24 Years	11.8	10.0	9.0	13.5	15.2	13.2
25–29 Years	7.7	8.9	7.8	9.8	12.8	14.9
30–34 Years	4.8	5.1	4.2	7.8	10.2	11.8
35–39 Years	5.0	2.8	2.9	6.0	7.0	8.5
40 Years or More	3.0	3.0	0	3.7	6.5	6.7
Total	100	100	100	100	100	100
Number Responding	6,143	6,423	10,241	11,127	8,762	10,380

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

All Chemists:
Employment and Salaries

Salaries are the focus of the last section of the report for all chemists, with the first group of tables showing reported salaries of full-time employed members in nominal dollars. The final table in this section of the report shows salaries converted to real dollars.

Tables for employment and salaries are based upon data from all chemists who were employed in full-time positions during the week of March 1, 2010.

Table A14: All Chemists (Median Salary by Gender, Years of Experience, and Highest Degree Earned) 1985–2010

		Year					
	All Full-time Worker Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Gender	All Chemists	40,000	50,000	59,628	70,000	82,600	90,000
	Men	42,000	52,000	62,000	73,400	88,000	96,000
	Women	30,000	39,024	46,800	55,100	68,000	73,944
Years of Experience	2–4	23,600	28,878	41,450	38,000	42,000	45,000
	5–9	31,000	36,845	52,000	49,000	57,000	62,000
	10–14	36,250	45,000	60,000	60,000	70,000	74,000
	15–19	41,000	50,000	65,000	69,000	78,758	85,000
	20–24	44,000	55,000	70,000	75,000	87,000	92,000
	25–29	46,000	58,000	72,000	80,000	92,000	100,000
	30–34	49,900	59,948	71,516	82,000	94,900	103,500
	35–39	50,000	60,200	73,000	81,275	95,800	104,000
	40 or More	52,000	63,000	—	80,137	95,000	107,000
Highest Degree	Bachelor's Degree	33,000	39,100	45,100	52,996	63,000	70,000
	Master's Degree	37,000	45,500	54,000	62,300	75,000	81,243
	Doctorate	44,800	55,000	66,000	78,000	92,100	100,000
	Other Professional Degree	40,000	44,350	71,000	81,000	90,000	130,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table A15: All Chemists (Median Salary in Nominal Dollars by Geographic Region and Highest Degree Earned) 1985–2010

	All Chemists Full-time Worker Median Salary (Nominal Dollars)	Year					
		1985	1990	1995	2000	2005	2010
Bachelor's Degree	New England	—	38,500	45,000	53,000	65,500	74,000
	Middle Atlantic	—	40,200	48,000	55,000	64,300	71,000
	South Atlantic	—	38,800	45,000	52,201	63,000	68,250
	East North Central	—	38,500	44,500	52,275	62,000	69,710
	East South CEntral	—	37,000	42,692	52,000	59,000	65,000
	West North Central	—	35,000	41,150	47,985	55,000	66,200
	West South Central	—	40,612	48,000	54,100	68,000	75,000
	Mountain	—	39,000	45,000	50,355	58,400	68,494
	Pacific	—	41,500	48,200	55,000	68,450	75,000
Master's Degree	New England	—	37,500	54,000	63,000	77,000	84,000
	Middle Atlantic	—	39,000	57,800	65,000	77,800	84,670
	South Atlantic	—	31,600	53,000	62,413	75,000	84,650
	East North Central	—	36,600	54,000	62,000	73,311	79,474
	East South Central	—	28,000	50,000	62,400	68,100	71,500
	West North Central	—	29,500	50,000	56,450	70,000	71,000
	West South Central	—	27,515	53,000	60,500	75,000	75,750
	Mountain	—	30,000	49,950	55,000	70,000	72,650
	Pacific	—	41,000	54,304	63,000	76,000	85,000
Doctorate	New England	—	50,000	68,000	80,000	98,000	110,000
	Middle Atlantic	—	47,500	70,800	82,800	96,000	104,000
	South Atlantic	—	44,933	65,880	78,000	92,000	100,000
	East North Central	—	45,000	65,027	78,000	91,000	92,127
	East South Central	—	39,898	60,000	65,000	77,000	78,000
	West North Central	—	42,000	60,000	70,000	80,000	84,000
	West South Central	—	41,500	64,720	74,000	88,751	95,961
	Mountain	—	42,000	61,000	75,000	90,000	99,310
	Pacific	—	50,000	66,400	80,000	97,500	105,000

Note. A long dash within a cell indicates that summary data are unavailable.

Table A16 All Chemists with All Degrees (Median Salary in Nominal Dollars by Gender and Years of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Men	2–4 Years	24,000	29,400	43,000	38,450	42,500	45,427
	5–9 Years	32,000	38,000	53,500	50,000	59,000	66,936
	10–14 Years	37,000	45,600	60,585	62,000	72,200	78,000
	15–19 Years	42,000	51,500	67,000	71,000	81,000	87,902
	20–24 Years	45,000	57,000	72,000	77,527	90,000	96,500
	25–29 Years	47,750	60,000	74,400	81,600	95,000	104,640
	30–34 Years	50,000	60,400	73,000	85,000	98,000	108,000
	35–39 Years	50,500	62,000	75,000	85,000	100,000	109,000
	40 or More Years	52,550	65,000	—	83,212	98,877	110,000
Women	2–4 Years	23,000	28,300	39,300	37,800	42,000	44,660
	5–9 Years	29,000	34,800	47,000	46,500	54,000	58,750
	10–14 Years	32,000	42,000	53,000	54,879	65,000	68,060
	15–19 Years	33,750	43,200	56,000	62,000	71,000	78,000
	20–24 Years	35,000	45,858	55,500	64,000	77,667	80,000
	25–29 Years	34,000	45,000	54,800	68,000	78,542	85,000
	30–34 Years	36,200	45,228	56,650	62,634	79,152	85,000
	35–39 Years	35,100	45,000	56,000	65,500	73,000	85,000
	40 or More Years	36,500	47,000	—	64,000	78,693	81,400

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table A17 All Chemists with Bachelor's Degree as Highest Degree (Median Salary in Nominal Dollars by Gender and Years of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Men	2–4 Years	23,300	28,800	40,000	38,000	42,250	45,000
	5–9 Years	29,000	35,000	47,492	45,000	53,950	59,315
	10–14 Years	33,500	41,000	54,300	53,000	60,000	69,494
	15–19 Years	37,750	45,000	57,000	62,000	70,000	77,000
	20–24 Years	41,000	50,000	62,900	67,200	75,000	81,000
	25–29 Years	44,000	53,520	64,500	68,657	80,000	86,033
	30–34 Years	45,750	55,750	67,000	72,000	79,812	90,260
	35–39 Years	46,000	56,500	65,986	71,750	82,500	89,000
	40 or More Years	50,000	58,600	—	72,500	80,000	90,000
Women	2–4 Years	23,000	28,024	38,000	37,090	42,000	44,000
	5–9 Years	26,500	32,450	43,368	42,800	50,025	52,000
	10–14 Years	30,000	37,000	48,857	51,000	58,000	63,000
	15–19 Years	33,000	39,932	50,000	53,940	65,000	70,000
	20–24 Years	33,000	41,500	50,000	56,600	66,000	76,716
	25–29 Years	32,850	41,798	52,000	60,000	70,000	72,000
	30–34 Years	34,000	45,228	50,550	55,000	72,443	78,755
	35–39 Years	36,400	42,300	49,000	60,750	68,700	77,636
	40 or More Years	36,000	45,000	—	60,794	70,500	61,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table A18 All Chemists with Master's Degree as Highest Degree (Median Salary in Nominal Dollars by Gender and Years of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Men	2–4 Years	26,950	34,000	42,000	48,000	49,369	49,000
	5–9 Years	30,900	36,500	49,500	50,000	60,000	65,950
	10–14 Years	35,000	43,000	57,793	57,625	68,750	75,000
	15–19 Years	39,000	48,000	62,400	65,000	75,000	83,000
	20–24 Years	42,000	51,375	64,000	70,000	80,000	92,000
	25–29 Years	44,000	54,108	66,950	75,000	84,722	97,000
	30–34 Years	47,550	58,000	67,800	75,000	89,500	95,000
	35–39 Years	50,000	60,000	65,100	76,408	86,000	98,100
	40 or More Years	50,000	62,000	—	70,450	84,700	92,000
Women	2–4 Years	26,000	30,450	40,000	42,000	47,000	48,500
	5–9 Years	29,000	35,000	45,400	47,140	56,000	58,900
	10–14 Years	32,000	42,000	50,000	52,000	62,762	68,000
	15–19 Years	31,500	41,300	55,920	58,625	71,000	67,500
	20–24 Years	33,000	43,600	53,000	60,000	72,000	80,000
	25–29 Years	32,100	40,300	49,536	63,100	74,271	79,080
	30–34 Years	29,050	42,372	49,550	61,150	72,924	70,000
	35–39 Years	32,000	43,400	53,056	56,604	70,000	75,282
	40 or More Years	32,250	43,565	—	55,000	67,200	69,500

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table A19 All Chemists with Doctorate as Highest Degree (Median Salary in Nominal Dollars by Gender and Years of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Men	2–4 Years	40,950	42,011	52,396	—	—	81,000
	5–9 Years	36,500	45,000	57,690	64,000	72,000	78,000
	10–14 Years	40,000	48,700	65,000	68,000	80,000	80,000
	15–19 Years	44,000	55,000	72,000	75,000	86,000	90,002
	20–24 Years	48,000	60,000	76,004	83,000	97,000	103,000
	25–29 Years	50,000	63,000	77,963	90,000	102,500	110,000
	30–34 Years	51,550	63,000	75,327	91,000	107,000	120,000
	35–39 Years	54,950	65,000	78,000	88,047	105,000	120,000
	40 or More Years	55,000	67,500	—	86,500	100,886	115,000
Women	2–4 Years	35,000	32,200	48,000	—	45,675	—
	5–9 Years	36,000	43,650	53,324	63,500	68,250	75,800
	10–14 Years	36,000	47,000	58,790	63,000	74,896	72,000
	15–19 Years	37,000	49,436	62,000	68,000	74,000	84,300
	20–24 Years	37,500	50,171	63,441	75,000	85,832	81,500
	25–29 Years	36,000	48,470	60,000	75,000	87,871	94,000
	30–34 Years	40,000	49,094	62,000	68,400	86,116	98,179
	35–39 Years	39,500	48,000	61,375	75,000	77,000	93,000
	40 or More Years	41,500	53,250	—	71,700	89,500	93,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table A20: All Chemists Median Salary in Nominal Dollars by Highest Degree Earned and Employer Type) 1985–2010

	Industrial Full-time Worker Median Salary by Employer Type (Nominal Dollars)	Year					
		1985	1990	1995	2000	2005	2010
All Degrees	Industry	42,000	52,000	62,168	73,872	90,000	101,000
	Academic	33,300	43,200	50,000	56,100	64,000	68,000
	Government	36,000	46,861	58,000	69,372	84,000	95,000
	Self-Employed	40,000	50,000	55,000	60,000	72,000	85,000
BS Highest	Industry	34,000	40,000	47,000	54,000	65,000	75,000
	Academic	20,000	26,982	27,000	36,000	42,000	40,000
	Government	33,000	37,500	44,658	53,000	62,400	66,956
	Self-Employed	31,000	40,000	54,500	53,847	60,000	65,000
MS Highest	Industry	39,300	48,000	58,000	66,500	80,000	90,000
	Academic	26,900	34,500	40,000	45,000	52,000	53,245
	Government	35,000	42,989	52,152	61,325	73,250	82,500
	Self-Employed	35,700	50,000	50,000	60,000	60,000	83,000
PhD Highest	Industry	50,000	60,000	72,000	85,260	103,000	115,000
	Academic	35,000	45,000	52,588	60,000	67,817	72,000
	Government	40,000	55,000	66,921	79,555	97,456	110,000
	Self-Employed	45,650	56,000	52,000	60,000	82,800	99,500

Note. A long dash within a cell indicates that summary data are unavailable.

Table A21 All Chemists (Median Salary in Nominal Dollars by Highest Degree Earned and Years of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Bachelor's Degree is Highest Degree	2–4 Years	23,000	28,500	39,000	37,500	42,000	44,500
	5–9 Years	28,000	34,000	45,500	44,115	52,000	55,000
	10–14 Years	33,000	40,000	52,700	52,250	59,300	67,000
	15–19 Years	37,000	44,020	55,000	60,000	68,200	75,000
	20–24 Years	40,000	48,022	60,000	65,000	72,300	80,000
	25–29 Years	43,200	50,400	61,500	66,200	78,000	82,430
	30–34 Years	45,000	55,000	65,000	67,760	77,275	88,000
	35–39 Years	45,000	55,638	64,650	70,000	80,000	85,600
	40 or More Years	49,750	55,750	—	70,000	77,290	85,000
Master's Degree is Highest Degree	2–4 Years	26,500	33,000	41,000	44,700	47,700	49,250
	5–9 Years	30,000	36,000	48,000	49,000	57,547	62,000
	10–14 Years	34,100	42,500	55,568	55,000	65,999	72,000
	15–19 Years	37,950	46,500	60,820	62,500	74,000	80,000
	20–24 Years	40,000	50,000	62,000	67,600	78,000	87,000
	25–29 Years	41,900	52,000	63,000	72,400	82,000	90,000
	30–34 Years	46,000	55,000	64,000	72,470	84,185	88,110
	35–39 Years	48,000	56,700	64,000	70,000	83,000	93,000
	40 or More Years	48,200	59,000	—	65,904	78,575	88,000
Doctorate is Highest Degree	2–4 Years	37,200	35,700	51,612	—	45,675	81,000
	5–9 Years	36,400	45,000	56,940	64,000	71,000	78,000
	10–14 Years	39,600	48,300	63,500	66,000	78,650	78,000
	15–19 Years	43,500	55,000	70,560	74,000	84,000	90,000
	20–24 Years	46,500	60,000	75,000	82,000	95,000	98,000
	25–29 Years	49,500	62,000	75,600	87,500	100,000	108,000
	30–34 Years	51,000	62,000	75,000	89,361	104,500	114,530
	35–39 Years	54,000	64,800	77,000	86,619	102,000	116,000
	40 or More Years	54,800	66,000	—	85,000	100,000	112,844

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table A22: All Chemists (Median Salary in Real Dollars by Gender, Years of Experience, and Highest Degree Earned) 1985–2010

	Full-time Worker Median Salary (Real Dollars)	Year 1985	1990	1995	2000	2005	2010
Gender	All Chemists	81,816	84,550	85,713	88,985	92,997	90,000
	Men	85,907	87,932	89,122	93,307	99,077	96,000
	Women	61,362	65,989	67,273	70,044	76,559	73,944
Years of Experience	2–4	48,272	48,832	59,583	48,306	47,287	45,000
	5–9	63,408	62,305	74,748	62,289	64,175	62,000
	10–14	74,146	76,095	86,247	76,273	78,811	74,000
	15–19	83,862	84,550	93,435	87,713	88,671	85,000
	20–24	89,998	93,005	100,622	95,341	97,951	92,000
	25–29	94,089	98,078	103,497	101,697	103,580	100,000
	30–34	102,066	101,372	102,801	104,239	106,845	103,500
	35–39	102,270	101,798	104,934	103,318	107,859	104,000
	40 or More	106,361	106,533	—	101,871	106,958	107,000
Highest Degree	Bachelor's Degree	67,498	66,118	64,829	67,368	70,930	70,000
	Master's Degree	75,680	76,940	77,623	79,196	84,440	81,243
	Doctorate	91,634	93,005	94,872	99,154	103,693	100,000
	Other Professional Degree	81,816	74,996	102059	102,968	101,328	130,000

Note. A long dash within a cell indicates that summary data are unavailable. Real dollars represent nominal dollars adjusted for inflaction using 2010 as the base year. Years of experience refers to years since earning a bachelor's degree.

The final table in this section, table A22, shows salaries converted to real dollars.
For comparisons across the twenty-five year period of ChemCensus surveys, we rely upon the real-dollar table. To convert from nominal to real dollars, we selected March 2010 as our base month and year. Bureau of Labor Statistics data for the Consumer Price Index (all urban consumers across all product categories) were utilized in making this conversion.

Salaries have increased in real dollars over the twenty-five-year period of ChemCensus surveys, with most of this increase being associated with higher salaries at the high end of years of experience. Women's salaries are lower than men's salaries overall. Differences between the salaries of men and women are also observed when we control for both the highest degree earned and years of experience (years since earning a bachelor's degree).

All Chemists

Industrial Chemists

This part of our report concerning the American Chemical Society's ChemCensus surveys for the last twenty-five years concerns industrial chemists, the largest of the member subgroups. These are ACS members who describe their principal employer as being in the industrial sector, regardless of the type of industry or chemical specialization. Like the other major parts of the report, it is divided into three major sections: an overview of industrial chemist demographics, review of edcuation of industrial members, and employment and salaries of industrial members.

Tables in this section of the report are drawn from data for all industrial chemists, regardless of their employment situation during the week of March 1, 2010.

Table B1: Industrial Chemists in the Workforce, Employment Status 1985–2010

	Year					
Industrial Chemists (%)	1985	1990	1995	2000	2005	2010
Employed Full-Time (35 hours/week or more)	97.0	97.5	95.6	95.6	93.4	96.6
Employed Part-Time	0.9	0.8	1.2	1.8	2.6	2.3
PostDoctoral/Other Fellowship	0.2	0.3	0.5	0.3	0.2	1.1
Seeking Employment	1.8	1.3	2.7	2.3	3.9	—
Total	100	100	100	100	100	100
Number Responding	28,082	24,510	29,321	29,219	20,474	18,877

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable. The percentage of chemists in the workforce and seeking employment is the unemployment rate.

Table B1 shows the employment breakdown of all members responding to the employment status item. Retired members from industry are included in the not-seeking-employment category. The proportion of responding industrial workers employed in full-time positions (working 35 hours a week or more) is relatively constant across the twenty-five year period. Differences in seeking employment and not seeking employment in 2010 from other years are explained by format differences.

Table B2: Industrial Chemists Demographics (Gender and Age) 1985–2010

		Year					
	Industrial Chemists (%)	1985	1990	1995	2000	2005	2010
Gender	Men	86.4	82.5	79.8	76.8	77.3	75.0
	Women	13.6	17.5	20.2	23.2	22.7	25.0
	Total	100	100	100	100	100	100
	Number Responding	28,197	24,667	29,843	29,233	20,478	18,509
Age	20-29	14.6	16.4	10.0	8.8	6.0	3.9
	30-39	31.6	33.9	33.4	28.7	22.7	21.0
	40-49	23.6	26.0	30.1	32.6	32.0	29.2
	50-59	20.1	16.4	20.0	23.7	28.9	32.2
	60-69	9.0	7.3	6.3	6.2	9.8	13.5
	70 or older	1.1	0	0.2	0.1	0.7	0.1
	Total	100	100	100	100	100	100
	Number Responding	28,290	24,787	29,979	29,357	20,554	18,125

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table B2 shows gender and age category breakdowns for industrial chemists. As with the total membership, the percentage of women chemists in industrial positions has been steadily increasing across the years. The age distribution has been trending older, as we will see later in tables 5 and 9, as well as in tables 3 and 8 for marital status.

Table B3: Industrial Chemists Demographics (Marriage and Family) 1985–2010

		Year					
	Industrial Chemists (%)	1985	1990	1995	2000	2005	2010
Marital Status	Single	19.5	20.8	20.1	19.0	17.9	16.6
	Married/Partnered	80.5	79.2	79.9	81.0	82.1	83.4
	Total	100	100	100	100	100	100
	Number Responding	28,172	24,628	29,534	29,357	20,435	18,499
	Of All Married/Partnered						
	To Chemist	10.1	11.5	13.1	14.1	14.3	14.3
	To Non-chemist Scientist	12.7	14.3	16.0	18.5	18.4	17.5
	To Non-scientist	77.3	74.2	70.9	67.3	67.3	68.2

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table B4: Industrial Chemists Demographics (Citizenship, Race/Ethnicity) 1985–2010

		Year					
	Industrial Chemists (%)	1985	1990	1995	2000	2005	2010
Citizenship	U.S. Native	87.7	88.0	83.5	79.4	79.5	75.7
	U.S. Naturalized	8.1	7.4	8.7	10.8	11.1	14.5
	Permanent Resident	3.8	3.9	6.7	7.2	7.0	8.0
	Other Visa Status	0.4	0.7	1.1	2.6	2.4	1.8
	Total	100	100	100	100	100	100
	Number Responding	28,259	24,693	29,805	29,249	20,471	18,534
Ethnicity/Race	Hispanic	0.8	1.4	2.0	2.5	2.4	3.0
	Non-hispanic						
	White	91.5	90.5	85.5	83.3	83.4	78.5
	Black/African American	0.9	1.0	1.3	1.8	1.6	1.8
	American Indian	0.1	0.3	0.2	0.1	0.1	0.2
	Asian	5.8	6.2	9.6	11.4	11.7	13.5
	Other or Multiracial	0.8	0.6	1.3	1.0	0.7	2.9
	Total	100	100	100	100	100	100
	Number Responding	28,024	23,722	29,554	26,793	20,265	18.200

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table B5: Industrial Chemists (Age by Gender) 1985–2010

	Year					
Men (%)	1985	1990	1995	2000	2005	2010
20-29	11.2	12.7	7.2	5.9	3.7	2.3
30-39	31.0	32.5	31.0	25.7	19.7	18.1
40-49	24.6	27.7	31.8	33.8	32.3	28.9
50-59	22.0	18.5	22.5	27.1	32.2	34.7
60-69	10.0	8.5	7.4	7.3	11.6	16.0
70 or older	1.1	0	0.2	0.1	0.4	0.1
Total	100	100	100	100	100	100
Number Responding	24,349	20,338	23,803	22,454	15,825	13,584

Women (%)	1985	1990	1995	2000	2005	2010
20-29	35.9	32.0	20.4	17.7	13.9	8.8
30-39	35.6	41.0	43.6	38.6	32.8	30.0
40-49	17.2	18.5	24.1	29.0	31.2	30.4
50-59	7.7	6.8	10.0	12.2	17.9	24.8
60-69	2.4	1.8	1.8	2.4	3.6	6.0
70 or older	1.1	0	0	0	0.6	0.1
Total	100	100	100	100	100	100
Number Responding	3,848	4,329	6,015	6,779	4,653	4,480

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

The age distribution has been trending older, as we can see in table B5, which shows age distributions by gender.

Table B6: Industrial Chemists (Citizenship by Gender) 1985–2010

	Year					
Men (%)	1985	1990	1995	2000	2005	2010
U.S. Native	87.8	87.7	83.6	79.9	79.7	75.8
U.S. Naturalized	8.0	7.4	8.5	10.4	11.1	14.2
Permanent Resident	3.9	4.1	6.8	7.2	7.0	8.2
Other Visa Status	0.4	0.8	1.1	2.5	2.2	1.8
Total	100	100	100	100	100	100
Number Responding	24,325	20,326	23,712	22,406	15,791	13,830

Women (%)	1985	1990	1995	2000	2005	2010
U.S. Native	87.9	89.1	83.4	77.8	78.8	75.4
U.S. Naturalized	9.2	7.3	9.1	12.2	11.2	15.4
Permanent Resident	2.8	3.0	6.3	7.4	7.1	7.4
Other Visa Status	0.1	0.6	1.2	2.7	2.9	1.8
Total	100	100	100	100	100	100
Number Responding	3,844	4,328	5,987	6,759	4,634	4,622

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table B6 shows a decline in U.S. native-born citizens as a percentage of industrial chemists. Permanent resident and other visa status categories have increased relative to U.S. native-born citizens. These, too, are twenty-five year trends, consistent with what we observe for all member chemists.

Table B7: Industrial Chemists (Ethnicity by Gender) 1985–2010

	Year					
Men (%)	1985	1990	1995	2000	2005	2010
Hispanic	0.8	1.3	1.9	2.2	2.2	2.6
Non-hispanic						
White	91.8	90.8	86.3	84.4	84.1	78.9
Black/African American	0.8	0.9	1.0	1.4	1.3	1.5
American Indian	0.1	0.3	0.2	0.1	0.1	0.2
Asian	5.7	6.1	9.3	10.8	11.4	13.7
Other	0.8	0.6	1.3	1.1	0.8	1.2
Multiracial	—	—	—	—	—	2.0
Total	100	100	100	100	100	100
Number Responding	24,122	19,509	23,458	20,508	15,627	13,565

Women (%)	1985	1990	1995	2000	2005	2010
Hispanic	1.0	1.9	2.6	3.4	3.2	4.2
Non-hispanic						
White	89.6	88.9	82.7	79.5	80.8	77.3
Black/African American	1.9	1.8	2.3	2.9	2.6	2.9
American Indian	0.1	0.6	0.2	0.2	0.1	0.2
Asian	7.0	6.4	10.8	13.3	12.7	13.1
Other	0.6	0.4	1.4	0.7	0.5	0.5
Multiracial	—	—	—	—	—	1.8
Total	100	100	100	100	100	100
Number Responding	3,821	4,182	5,970	6,231	4,606	4,571

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table B7 shows trends in ethnicity across the ChemCensus years. The most telling trend is in the percentage of industrial chemists identifying themselves as having Asian descent. Black/African American chemists continue to be in the minority, with only 1.5 percent of men and 2.9 percent of women identifying themselves as being Black/African American in 2010. Hispanics are increasing as a percentage of industrial chemists, but these percentages remain low. The multiracial category was introduced in 2010, making precise twenty-five-year comparisons across race and ethnicity difficult.

Table B8: Industrial Chemists (Marriage and Family by Gender) 1985–2010

		Year					
	Men (%)	1985	1990	1995	2000	2005	2010
Marital Status	Single	15.9	17.1	16.9	15.4	14.3	12.6
	Married/Partnered	84.1	82.9	83.1	84.6	85.7	87.4
	Total	100	100	100	100	100	100
	Number Responding	24,259	20,276	23,488	22,454	15,760	13,822
	Of All Married/Partnered						
	To Chemist	7.9	9.0	10.1	11.2	11.7	11.5
	To Non-chemist Scientist	10.9	12.2	13.9	16.6	16.9	16.5
	To Non-scientist	81.2	78.8	76.0	72.2	71.3	72.0

	Women (%)	1985	1990	1995	2000	2005	2010
Marital Status	Single	41.5	38.2	32.8	30.9	29.8	28.6
	Married/Partnered	58.5	61.8	67.2	69.1	70.2	71.4
	Total	100	100	100	100	100	100
	Number Responding	3,830	4,319	5,951	6,779	4,638	4,600
	Of All Married/Partnered						
	To Chemist	30.2	26.4	27.7	25.9	19.3	23.5
	To Non-chemist Scientist	26.6	27.3	27.0	26.6	22.9	23.7
	To Non-scientist	43.2	46.2	45.2	47.5	57.8	52.8

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table A8 shows industrial chemists broken down by gender and marital status. Reporting members identifying themselves as being married/partners have increased over the years for both men and women. This could be explained by the fact that mean ages have increased over the same period of time.

Table B9: Industrial Chemists, Full-Time Workers Mean Age by Demographic Group 1985–2010

		Year					
	Industrial Full-time Worker (Mean Age)	1985	1990	1995	2000	2005	2010
Gender	All Chemists	42.8	40.3	42.3	43.5	46.1	47.6
	Men	43.9	41.7	43.6	45.0	47.5	49.0
	Women	35.7	34.4	37.3	38.8	41.2	43.5
Ethnicity	Hispanic	38.8	38.0	39.5	40.9	43.0	44.5
	Non-hispanic						
	White	43.0	40.6	42.6	43.7	46.3	48.1
	Black/African American	40.0	36.9	39.3	40.6	44.0	44.8
	American Indian	37.3	37.5	40.9	43.2	45.4	49.2
	Asian	41.9	39.4	40.9	42.2	44.3	45.8
	Other	39.6	38.3	40.6	43.0	46.3	49.6
	Multiracial	—	—	—	—	—	46.9
Citizenship	U.S. Native	42.5	40.2	42.2	43.6	46.3	47.9
	U.S. Naturalized	47.8	44.7	46.7	47.1	49.3	49.9
	Permanent Resident	40.3	38.6	39.2	40.7	41.8	42.9
	Other Visa Status	36.1	33.5	33.4	35.3	36.0	37.5
Highest Degree	Associate Degree	—	—	43.3	44.4	49.0	50.3
	Bachelor's Degree	41.0	37.8	39.4	40.5	43.1	45.2
	Master's Degree	43.0	40.7	42.6	43.9	46.7	48.0
	Doctorate	44.0	41.8	43.8	45.0	47.4	48.4
	Other Professional Degree	45.5	44.4	44.3	47.1	47.6	48.4

Note. A long dash within a cell indicates that summary data are unavailable.

Again we see that the age distribution has been trending older. Table B9 shows mean ages of industrial chemists overall, as well as mean ages of industrial chemists by demographic group.

Industrial Chemists: Education

Tables for industrial chemists' education are drawn from data for all industrial chemists, regardless of their employment situation during the week of March 1, 2010.

Table B10: Industrial Chemists Education (Highest Degree Received) 1985–2010

	Year					
Industrial Chemists (%)	1985	1990	1995	2000	2005	2010
Associate Degree	—	—	0.5	0.6	0.6	0.4
Bachelor's Degree	32.6	31.4	30.1	28.7	25.9	23.0
Master's Degree	21.8	21.1	20.9	20.8	20.2	19.9
Doctorate	44.9	47.1	48.0	49.3	52.6	55.7
Other	0.7	0.4	0.5	0.7	0.7	0.9
Total	100	100	100	100	100	100
Number Responding	28,290	24,787	29,779	29,357	20,554	18,918

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table B10 provides a summary of highest degrees earned by industrial chemists responding the the ChemCensus surveys. Here we see an increase in the percentage of industrial having doctoral degrees from one quinquennial survey to the next. Among responding industrial chemists in 1985, only 44.9 percent possessed doctoral degrees. By 2010, that percentage had increased to 55.7 percent.

Table B11: Industrial Chemists (Highest Degree by Gender) 1985–2010

	Year					
Men (%)	1985	1990	1995	2000	2005	2010
Associate Degree	—	—	0.5	0.5	0.5	0.4
Bachelor's Degree	30.2	28.3	26.6	25.0	23.1	20.6
Master's Degree	20.9	20.1	19.7	19.5	18.6	18.0
Doctorate	48.2	51.2	52.7	54.4	57.2	60.2
Other	0.7	0.4	0.5	0.7	0.6	0.9
Total	100	100	100	100	100	100
Number Responding	24,349	20,338	23,646	22,454	15,825	13,861

Women (%)	1985	1990	1995	2000	2005	2010
Associate Degree	—	—	0.7	0.8	0.8	0.6
Bachelor's Degree	47.9	45.9	43.8	40.9	35.6	30.8
Master's Degree	27.1	25.8	25.4	25.3	25.9	25.7
Doctorate	23.9	27.9	29.5	32.3	36.9	42.0
Other	1.0	0.5	0.5	0.7	0.8	0.9
Total	100	100	100	100	100	100
Number Responding	3,848	4,392	5,982	6,779	4,653	4,626

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

When we look at men and women separately, as shown in Table B11, we see a similar pattern of higher percentages of industrial chemists holding doctorates across the twenty-five-year period. Also evident from these data is the fact that higher percentages of men hold doctorates than women. Among industrial chemists responding to the 2010 ChemCensus, 60.2 percent of men held doctorates, while 43.0 percent of women held doctorates.

Table B12: Industrial Chemists (Years of Experience) 1985–2010

	Year					
All Industrial Chemists (%)	1985	1990	1995	2000	2005	2010
0–1 Years	1.2	0.9	4.0	0.1	0.7	0.4
2–4 Years	5.3	5.0	11.2	4.2	2.4	2.3
5–9 Years	15.4	15.5	17.6	10.0	7.8	6.4
10–14 Years	16.0	18.5	17.3	14.0	12.2	12.1
15–19 Years	14.2	15.7	14.7	17.2	12.9	13.4
20–24 Years	12.7	12.9	12.9	15.6	16.3	13.2
25–29 Years	9.9	11.6	11.1	14.0	16.0	16.8
30–34 Years	10.5	8.2	6.4	11.9	14.5	15.3
35–39 Years	9.7	7.1	4.7	8.6	10.5	11.8
40 Years or More	5.0	4.7	0	4.3	6.8	8.2
Total	100	100	100	100	100	100
Number Responding	28,084	22,790	29,221	29,095	20,450	17,969

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Tables B12 and B13 show years of experience, which we define as years since earning the bachelor's degree. Distributional changes for this demographic are consistent with the trend in ages observed earlier.

Table B13: Industrial Chemists (Years of Experience) 1985–2010

	Year					
Men (%)	1985	1990	1995	2000	2005	2010
0–1 Years	0.7	0.6	2.9	0.1	0.4	0.3
2–4 Years	3.8	3.6	8.9	2.8	1.5	1.4
5–9 Years	13.4	12.7	16.0	7.7	5.8	4.5
10–14 Years	15.7	17.5	17.4	12.1	10.5	10.5
15–19 Years	14.7	16.2	15.5	16.8	12.2	12.6
20–24 Years	13.3	13.9	14.1	16.3	16.4	13.0
25–29 Years	10.5	12.6	12.5	15.6	17.0	17.5
30–34 Years	11.6	9.2	7.3	13.6	16.1	16.7
35–39 Years	10.7	8.2	5.4	10.1	12.2	13.6
40 Years or More	5.6	5.4	0	4.9	7.9	9.9
Total	100	100	100	100	100	100
Number Responding	24,184	18,668	23,286	22,281	15,761	13,189

Women (%)	1985	1990	1995	2000	2005	2010
0–1 Years	4.1	2.2	8.8	0.2	1.6	0.9
2–4 Years	15.0	11.4	20.7	9.1	5.4	4.9
5–9 Years	28.3	28.4	24.3	17.7	14.7	12.1
10–14 Years	17.6	23.2	17.0	20.1	18.2	17.1
15–19 Years	11.3	13.2	11.4	18.5	15.5	15.7
20–24 Years	9.1	8.5	7.9	13.5	15.7	13.8
25–29 Years	5.9	6.6	5.5	8.9	12.7	15.0
30–34 Years	3.6	3.2	2.7	6.0	8.8	10.7
35–39 Years	3.4	1.9	1.7	3.8	4.6	6.4
40 Years or More	1.7	1.2	0	2.3	2.8	3.3
Total	100	100	100	100	100	100
Number Responding	3,808	4,013	5,794	6,696	4,614	4,385

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Industrial Chemists: Employment and Salaries

Salaries are the focus of this section of the report on industrial chemists, with most of the tables showing reported annual salaries in nominal dollars. Tables for industrial chemists' employment and salary are drawn from data for industrial chemists who were employed full-time during the week of March 1, 2010.

Table B14: Industrial Chemists (Median Salary in nominal Dollars by Gender, Years of Experience, and Highest Degree Earned) 1985–2010

		Year					
	Industrial Full-time Worker Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Gender	All Chemists	42,000	52,000	62,168	73,872	90,000	101,000
	Men	44,000	54,800	65,100	78,000	94,000	105,600
	Women	31,500	40,500	50,000	60,000	76,000	87,000
Years of Experience	2–4	24,000	29,400	43,500	39,000	44,350	48,000
	5–9	32,500	38,400	55,560	50,070	60,000	66,100
	10–14	39,000	47,500	63,004	65,000	79,600	85,000
	15–19	44,800	54,000	70,000	74,000	87,000	96,332
	20–24	50,000	60,000	76,000	80,000	95,000	106,000
	25–29	51,000	65,000	80,000	85,482	100,000	110,500
	30–34	53,000	65,300	80,000	90,482	103,438	117,400
	35–39	53,600	65,100	78,300	91,758	105,000	118,286
	40 or More	55,000	67,200	—	85,242	102,000	120,000
Highest Degree	Bachelor's Degree	34,000	40,000	47,000	54,000	65,000	75,000
	Master's Degree	39,300	48,000	58,000	66,500	80,000	90,000
	Doctorate	50,000	60,000	72,000	85,260	103,000	115,000
	Other Professional Degree	40,000	45,000	80,500	87,250	106,000	150,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table B15: Industrial Chemists (Median Salary in Nominal Dollars by Geographic Region and Highest Degree Earned) 1985–2010

	Industrial Full-time Worker Median Salary (Nominal Dollars)	Year					
		1985	1990	1995	2000	2005	2010
Bachelor's Degree	New England	—	39,675	46,150	54,640	67,802	80,000
	Middle Atlantic	—	40,200	48,700	55,788	65,000	75,000
	South Atlantic	—	40,000	45,312	52,536	63,855	74,445
	East North Central	—	39,000	45,800	53,100	64,200	72,000
	East South CEntral	—	37,000	44,000	53,353	62,250	70,000
	West North Central	—	36,100	42,600	48,789	58,206	70,000
	West South Central	—	43,000	50,300	57,139	72,000	80,332
	Mountain	—	40,000	47,000	51,900	60,257	70,000
	Pacific	—	42,000	50,000	55,516	70,000	78,000
Master's Degree	New England	—	50,000	58,000	66,500	81,294	91,000
	Middle Atlantic	—	50,000	60,000	68,000	80,376	92,000
	South Atlantic	—	48,000	55,570	66,000	80,672	90,000
	East North Central	—	46,700	58,000	65,000	80,000	89,550
	East South Central	—	48,000	57,000	68,550	80,400	85,000
	West North Central	—	45,810	56,000	62,000	75,208	80,000
	West South Central	—	48,000	59,000	67,550	87,000	98,650
	Mountain	—	44,000	53,664	60,530	80,000	85,000
	Pacific	—	49,000	59,000	68,500	82,000	94,000
Doctorate	New England	—	60,000	72,000	87,000	105,000	120,500
	Middle Atlantic	—	61,000	75,000	88,989	105,000	120,000
	South Atlantic	—	59,000	71,400	85,000	100,000	112,000
	East North Central	—	59,000	72,000	85,000	102,600	110,000
	East South Central	—	59,000	66,400	80,100	96,346	105,000
	West North Central	—	57,450	70,000	80,000	101,000	110,000
	West South Central	—	60,200	72,000	83,484	104,000	120,000
	Mountain	—	56,300	68,510	80,664	97,000	115,000
	Pacific	—	61000	73,000	87,000	105,665	119,000

Note. A long dash within a cell indicates that summary data are unavailable.

Table B16: Industrial Chemists (Median Salary in Nominal Dollars by Employer Size and Highest Degree Earned) 1985–2010

	Industrial Full-time Worker Median Salary (Nominal Dollars)	Year					
		1985	1990	1995	2000	2005	2010
Bachelor's Degree	Fewer than 50 Employees	—	—	—	48,048	58,508	65,500
	50–99 Employees	—	—	—	47,500	59,000	66,000
	100–499 Employees	—	—	—	50,000	59,000	68,000
	fewer than 500 Employees	—	—	41,150	49,000	59,000	67,000
	500–2,499 Employees	—	—	46,000	52,490	63,000	72,000
	2,500–9,999 Employees	—	—	49,850	58,000	67,500	78,300
	10,000–24,999 Employees	—	—	52,000	58,000	69,500	83,552
	25,000 or More Employees	—	—	52,000	57,600	72,000	85,000
Master's Degree	Fewer than 50 Employees	—	—	—	60,000	72,000	78,000
	50–99 Employees	—	—	—	60,000	75,000	82,400
	100–499 Employees	—	—	—	60,000	75,000	85,000
	fewer than 500 Employees	—	—	52,000	60,000	74,568	81,143
	500–2,499 Employees	—	—	56,000	63,534	80,000	85,000
	2,500–9,999 Employees	—	—	59,350	70,000	80,555	96,000
	10,000–24,999 Employees	—	—	60,000	70,000	83,500	94,000
	25,000 or More Employees	—	—	62,920	69,836	85,000	97,782
Doctorate	Fewer than 50 Employees	—	—	—	75,000	91,400	100,000
	50–99 Employees	—	—	—	78,250	95,500	105,000
	100–499 Employees	—	—	—	79,000	98,000	110,000
	fewer than 500 Employees	—	—	65,000	77,178	95,000	105,000
	500–2,499 Employees	—	—	70,000	82,000	100,000	110,000
	2,500–9,999 Employees	—	—	73,000	86,914	102,000	115,000
	10,000–24,999 Employees	—	—	74,000	86,000	102,300	120,000
	25,000 or More Employees	—	—	77,000	90,980	110,000	125,000

Note. A long dash within a cell indicates that summary data are unavailable.

Table B17 is a three-part table, showing median annual salaries broken down by primary work function. The three parts, labeled A, B, and C, show salaries for industrial chemists whose highest degrees are bachelor's, master's, and doctoral degrees, respectively.

Table B17a: Industrial Chemists with Bachelor's as Highest Degree (Median Salary in Nominal Dollars by Sector and Primary Work Function) 1985–2010

Primary Work Function: Industrial Full-time Worker with BS Median Salary (Nominal Dollars)	Year 1985	1990	1995	2000	2005	2010
Analytical Services, Other than Forensics	—	—	—	47,114	55,125	65,000
Chemistry Information Services	—	40,600	49,000	56,118	68,827	81,478
Computer Programming/Analysis/Design	—	42,000	51,708	60,500	73,900	100,000
Consulting	36,200	41,500	47,000	62,400	74,000	80,000
Forensic Analytics	25,750	31,408	39,000	47,500	56,000	67,000
General Management/Administration (Other than R&D)	45,500	50,023	60,000	74,032	85,000	98,000
Health and Safety/Regulatory Affairs	—	42,000	52,000	60,000	72,085	85,000
Marketing/Sales/Purchasing/Technical Service/Economic Evaluation	40,000	45,000	55,000	66,000	79,000	85,000
Patents/Licensing/Trademarks	—	—	65,000	74,500	94,000	122,000
Production/Quality Control	30,000	36,700	43660	50,000	61,185	67,500
Research and Development:						
Applied Research/Development/ Design	32,000	38,000	45,100	54,000	65,000	74,575
Basic Research	26,300	32,500	40,000	48,515	58,000	64,800
Management or Administration of Research and Development	47,200	59,300	65,000	80,000	94,000	111,000
Training or Teaching	—	47,500	38,000	54,000	61,600	84,818
Writing and Editing	34,550	41,000	—	—	—	—
Other Lab Analysis	—	—	37,000	—	—	—
Other Functions	34,700	39,000	48,000	58,000	67,100	80,000

Note. A long dash within a cell indicates that summary data are unavailable.

Table B17b: Industrial Chemists with Masters's as Highest Degree (Median Salary in Nominal Dollars by Sector and Primary Work Function) 1985–2010

		Year					
	Industrial Full-time Worker with MS Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Primary Work Function	Analtytical Services, Other than Forensics	—	—	—	59,000	70,062	78,000
	Chemistry Information Services	—	46,392	58,500	64,740	74,500	87,000
	Computer Programming/Analysis/Design	—	48,800	60,175	70,000	86,400	96,000
	Consulting	39,600	46,000	57,896	70,500	85,000	99,600
	Forensic Analytics	31,100	38,250	61,500	55,000	69,054	65,900
	General Management/Administration (Other than R&D)	50,000	61,000	71,000	87,400	103,700	118,008
	Health and Safety/Regulatory Affairs	—	49,850	60,000	72,900	83,832	98,000
	Marketing/Sales/Purchasing/Technical Service/Economic Evaluation	41,700	52,000	65,000	75,450	88,000	100,000
	Patents/Licensing/Trademarks	—	—	63,700	96,500	95,593	109,000
	Production/Quality Control	36,000	43,000	52,000	60,000	76,325	85,000
	Research and Development:						
	Applied Research/Development/ Design	37,000	45,818	54,854	62,500	77,808	86,000
	Basic Research	32,400	40,000	48,111	60,134	75,000	83,000
	Management or Administration of Research and Development	51,000	61,000	75,000	90,000	104,000	125,000
	Training or Teaching	—	37,500	52,000	62,750	64,500	77,000
	Writing and Editing	38,000	41,850	—	—	—	—
	Other Lab Analysis	—	—	45,000	—	—	—
	Other Functions	40,000	49,750	58,550	70,000	81,500	94,000

Note. A long dash within a cell indicates that summary data are unavailable.

Table B17c: Industrial Chemists with Doctorate as Highest Degree (Median Salary in Nominal Dollars by Sector and Primary Work Function) 1985–2010

		Year					
	Industrial Full-time Worker with PhD Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Primary Work Function	Analytical Services, Other than Forensics	—	—	—	78,000	92,866	103,000
	Chemistry Information Services	—	58,390	62,272	74,100	95,000	103,000
	Computer Programming/Analysis/Design	—	55,200	68,000	84,000	100,000	109,500
	Consulting	50,000	60,200	72,000	90,000	99,500	120,000
	Forensic Analytics	41,000	52,000	65,700	72,294	92,880	137,800
	General Management/Administration (Other than R&D)	63,000	75,000	90,000	110,000	125,000	143,000
	Health and Safety/Regulatory Affairs	—	63,000	80,000	90,000	105,000	125,000
	Marketing/Sales/Purchasing/Technical Service/Economic Evaluation	51,000	61,000	75,000	86,500	100,029	112,000
	Patents/Licensing/Trademarks	—	—	90,000	104,000	122,000	126,000
	Production/Quality Control	44,000	55,000	64,968	77,415	97,000	110,000
	Research and Development:						
	Applied Research/Development/ Design	45,000	55,100	67,560	81,000	98,200	110,000
	Basic Research	44,000	55,110	68,000	85,000	100,050	115,000
	Management or Administration of Research and Development	60,000	75,000	90,000	108,000	130,000	150,000
	Training or Teaching	—	45,000	57,304	87,775	100,510	92,500
	Writing and Editing	45,000	47,525	—	—	—	—
	Other Lab Analysis	—	—	61,774	—	—	—
	Other Functions	52,000	65,000	72,000	85,000	100,000	111,500

Note. A long dash within a cell indicates that summary data are unavailable.

Table B18 is a four-part table, showing median annual salaries broken down by years of experience, defined as the number of years since earning a bachelor's degree. Part A shows median salaries for all industrial chemists. And the parts labeled B, C, and D show salaries for chemists whose highest degrees are bachelor's, master's, and doctoral degrees, respectively.

Table B18a Industrial Chemists with All Degrees (Median Salary in Nominal Dollars by Gender and Years of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Men	2–4 Years	24,600	30000	45,000	39,700	45,000	48,500
	5–9 Years	33,500	40000	57,000	52,000	60,780	70,000
	10–14 Years	39,500	48000	65,000	67,000	81,000	87,000
	15–19 Years	45,000	55000	71,500	75,000	89,990	99,164
	20–24 Years	50,000	61000	77,510	82,000	97,000	108,000
	25–29 Years	52,000	66147	82,000	87,450	101,546	114,600
	30–34 Years	53,300	67150	82,000	92,500	105,000	120,000
	35–39 Years	54,000	66450	79,898	94,000	107,500	120,000
	40 or More Years	55,000	68680	—	87,800	104,462	120,000
Women	2–4 Years	23,700	29000	41,425	38,600	44,000	46,600
	5–9 Years	30,000	35700	51,000	48,687	58,000	62,000
	10–14 Years	35,000	44200	58,500	60,288	74,160	79,500
	15–19 Years	39,000	48980	62,900	68,060	82,000	90,000
	20–24 Years	39,600	52000	63,100	71,020	87,500	100,000
	25–29 Years	38,000	50000	63,250	75,145	92,000	102,000
	30–34 Years	41,250	48328	60,000	74,000	95,000	103,000
	35–39 Years	43,000	46450	63,050	71,000	85,708	103,000
	40 or More Years	37,950	53000	—	67,200	82,000	101,800

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table B18b Industrial Chemists with Bachelor's Degree as Highest Degree
(Median Salary in Nominal Dollars by Gender and Years of Experience) 1985–2010

	Full-time Worker Experience Median Salary (Nominal Dollars)	Year 1985	1990	1995	2000	2005	2010
Men	2–4 Years	24,000	29,200	40,000	38,900	44,000	48,500
	5–9 Years	29,400	35,000	48,000	46,000	54,600	60,000
	10–14 Years	34,000	42,000	55,195	53,900	62,000	70,000
	15–19 Years	39,600	46,000	59,076	63,500	71,000	78,000
	20–24 Years	41,500	51,000	65,000	69,435	77,000	85,000
	25–29 Years	45,000	55,000	66,774	70,250	84,000	88,100
	30–34 Years	47,000	58,200	70,000	75,000	83,000	96,950
	35–39 Years	47,000	59,000	67,500	73,500	87,210	91,000
	40 or More Years	50,000	60,000	—	75,330	83,537	96,993
Women	2–4 Years	23,000	28,756	39,000	38,000	43,700	46,134
	5–9 Years	27,000	33,000	44,868	43,475	51,900	55,000
	10–14 Years	30,000	37,500	51,050	52,000	59,212	65,000
	15–19 Years	34,900	41,218	51,100	56,000	67,100	75,000
	20–24 Years	36,000	43,800	51,000	59,000	70,100	84,750
	25–29 Years	34,200	42,000	53,450	61,100	76,102	80,000
	30–34 Years	36,200	45,000	52,875	60,000	75,515	83,000
	35–39 Years	37,550	43,000	51,250	61,980	67,850	85,000
	40 or More Years	36,900	51,974	—	62,500	75,000	75,021

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table B18c Industrial Chemists with Master's Degree as Highest Degree (Median Salary in Nominal Dollars by Gender and Years of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Men	2–4 Years	27,350	34,000	43,530	50,000	50,000	56,000
	5–9 Years	31,200	37,326	50,000	51,900	61,000	67,100
	10–14 Years	35,300	44,000	60,000	59,000	71,000	78,000
	15–19 Years	40,000	50,000	65,000	67,000	80,000	89,000
	20–24 Years	45,200	54,700	69,000	74,444	84,000	97,000
	25–29 Years	48,000	58,000	72,000	79,000	90,000	102,000
	30–34 Years	50,000	62,250	74,750	82,000	95,000	103,000
	35–39 Years	51,000	62,450	74,170	85,398	93,200	105,000
	40 or More Years	51,000	63,000	—	80,000	95,000	108,000
Women	2–4 Years	26,950	32,000	42,000	44,500	49,500	59,225
	5–9 Years	30,000	35,820	47,480	49,200	58,900	62,000
	10–14 Years	33,000	43,300	55,000	54,300	68,000	73,000
	15–19 Years	35,000	45,540	60,700	61,200	77,000	79,619
	20–24 Years	38,300	50,190	60,150	65,549	77,500	90,000
	25–29 Years	36,000	49,300	62,500	71,500	84,040	92,000
	30–34 Years	41,000	45,000	58,500	72,000	90,000	94,000
	35–39 Years	41,000	50,500	68,500	68,000	84,000	100,000
	40 or More Years	36,250	45,000	—	61,000	74,000	100,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table B18d Industrial Chemists with Doctorate as Highest Degree (Median Salary in Nominal Dollars by Gender and Years of Experience) 1985–2010

	Full-time Worker Experience Median Salary (Nominal Dollars)	Year 1985	1990	1995	2000	2005	2010
Men	2–4 Years	37,350	—	56,000	—	—	—
	5–9 Years	38,000	47,020	62,000	68,712	82,384	86,550
	10–14 Years	42,000	52,000	70,000	74,000	90,000	95,000
	15–19 Years	48,800	59,100	77,475	81,000	96,000	106,400
	20–24 Years	54,000	65,400	83,020	90,000	105,000	120,000
	25–29 Years	57,800	72,000	88,200	96,540	111,780	125,000
	30–34 Years	60,000	73,850	89,000	100,000	116,000	131,000
	35–39 Years	60,000	75,000	85,000	100,000	115,850	132,000
	40 or More Years	61,000	75,000	—	93,440	113,000	129,866
Women	2–4 Years	35,400	—	56,000	—	—	—
	5–9 Years	37,500	46,500	60,000	69,000	79,000	91,000
	10–14 Years	40,000	50,300	67,200	72,000	88,000	96,950
	15–19 Years	44,000	57,000	73,282	77,750	92,000	100,000
	20–24 Years	46,000	60,000	77,000	88,600	100,789	110,000
	25–29 Years	45,000	59,400	71,000	90,330	105,000	120,000
	30–34 Years	50,000	54,000	72,000	90,000	110,000	125,000
	35–39 Years	53,500	50,000	72,500	80,151	108,000	120,000
	40 or More Years	46,000	65,500	—	81,500	100,000	116,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table B19 Industrial Chemists (Median Salary in Nominal Dollars by Highest Degree Earned and Years of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Bachelor's Degree is Highest Degree	2–4 Years	23,600	29,000	40,000	38,450	43,800	47,550
	5–9 Years	28,600	34,700	46,350	45,000	53,000	57,000
	10–14 Years	33,300	40,500	54,472	53,000	60,650	68,284
	15–19 Years	38,450	45,000	57,000	61,476	70,000	77,000
	20–24 Years	40,200	50,000	62,594	67,000	75,000	85,000
	25–29 Years	44,000	53,000	65,000	69,198	82,000	86,033
	30–34 Years	46,000	56,340	68,000	72,000	81,000	94,132
	35–39 Years	46,000	58,000	65,000	70,620	82,500	90,000
	40 or More Years	50,000	60,000	—	72,809	79,200	94,000
Master's Degree is Highest Degree	2–4 Years	27,000	33,500	43,000	48,000	50,000	57,500
	5–9 Years	31,000	36,840	49,920	50,350	60,000	64,314
	10–14 Years	35,000	44,000	59,000	57,500	70,000	75,100
	15–19 Years	40,000	49,374	65,000	65,000	79,034	85,000
	20–24 Years	44,300	53,200	67,313	71,832	82,000	95,000
	25–29 Years	45,550	56,275	70,000	77,000	89,500	98,000
	30–34 Years	50,000	60,000	71,640	80,000	94,275	101,850
	35–39 Years	50,000	60,900	73,000	82,000	93,000	103,859
	40 or More Years	51,000	63,000	—	75,000	92,000	106,550
Doctorate is Highest Degree	2–4 Years	36,600	—	56,000	—	—	—
	5–9 Years	38,000	47,000	61,000	69,000	81,000	87,500
	10–14 Years	42,000	51,500	69,500	73,000	90,000	95,755
	15–19 Years	48,000	59,000	77,000	80,000	95,000	105,000
	20–24 Years	54,000	65,000	83,000	90,000	104,318	118,000
	25–29 Years	56,300	71,000	87,406	96,000	110,500	125,000
	30–34 Years	60,000	72,500	88,000	100,000	115,450	130,000
	35–39 Years	60,000	74,300	85,000	100,000	115,700	130,176
	40 or More Years	60,400	74,280	—	92,700	112,000	128,255

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table B20: Industrial Chemists (Median Salary in Real Dollars by Gender, Years of Experience, and Highest Degree Earned) 1985–2010

	Industrial Full-time Worker Median Salary (Real Dollars)	Year 1985	1990	1995	2000	2005	2010
Gender	All Chemists	85,907	87,932	89,363	93,907	101,328	101,000
	Men	89,998	92,667	93,578	99,154	105,832	105,600
	Women	64,430	68,485	71,873	76,273	85,566	87,000
Years of Experience	2–4	49,090	49,715	62,529	49,577	49,932	48,000
	5–9	66,476	64,934	79,865	63,649	67,552	66,100
	10–14	79,771	80,322	90,566	82,629	89,619	85,000
	15–19	91,634	91,314	100,622	94,069	97,951	96,332
	20–24	102,270	101,460	109,247	101,697	106,958	106,000
	25–29	104,316	109,915	114,997	108,665	112,587	110,500
	30–34	108,406	110,422	114,997	115,022	116,457	117,400
	35–39	109,634	110,084	112,553	116,643	118,217	118,286
	40 or More	112,497	113,635	—	108,360	114,839	120,000
Highest Degree	Bachelor's Degree	69,544	67,640	67,560	68,645	73,182	75,000
	Master's Degree	80,384	81,168	83,373	84,535	90,070	90,000
	Doctorate	102,270	101,460	103497	108,383	115,965	115,000
	Other Professional Degree	81,816	76,095	115715	110,913	119,342	150,000

Note. A long dash within a cell indicates that summary data are unavailable. Real dollars represent nominal dollars adjusted for inflaction using 2010 as the base year. Years of experience refers to years since earning a bachelor's degree.

This final table shows salaries converted to real dollars. For comparisons across the twenty-five year period of ChemCensus surveys, we rely upon real dollars. Generally speaking, salaries have increased in real dollars over the twenty-five-year period of ChemCensus surveys, with most of this increase being associated with higher salaries at the high end of years of experience.

Women's salaries in industry are lower than men's salaries overall. Differences between the salaries of men and women are also observed when we control for both the highest degree earned and years of experience (years since earning a bachelor's degree).

Academic Chemists

As part of a complete report examining data from the American Chemical Society's ChemCensus surveys for the last twenty-five years, beginning in 1985 and conducted every five years, through the most recent survey, ChemCensus2010, this part of our report concerns academic chemists. These are ACS members who describe their principal employer as being an educational institution, regardless of the level of institution, control structure (public or private), or chemical specialization. This part of the report, like others before it, is divided into three major sections: an overview of academic member demographics, review of education of academic members, and employment and salaries of academic members.

Tables for demographic characteristics are constructed using data for all academic chemists, regardless of employment status during the week of March 1, 2010.

Table C1: Academic Workforce Chemists, Employment Status 1985–2010

	Year					
Academic Chemists (%)	1985	1990	1995	2000	2005	2010
Employed Full-Time (35 hours/week or more)	89.8	89.8	83.0	88.1	87.2	85.6
Employed Part-Time	2.9	2.5	4.9	4.5	5.5	5.3
PostDoctoral/Other Fellowship	6.1	6.9	9.9	6.1	5.7	9.2
Seeking Employment	1.2	0.8	2.2	1.3	1.5	—
Total	100	100	100	100	100	100
Number Responding	9,042	9,000	12,231	11,389	9,118	11,483

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable. The percentage of chemists in the workforce and seeking employment is the unemployment rate.

Table C1 shows the employment breakdown of academic chemists responding to the employment status item. Retired members are included in the not-seeking-employment category. The proportion of responding academic chemists employed in full-time positions (working 35 hours a week or more) is relatively constant across the twenty-five year period, though these percentages are lower than those observed in industry. Differences in seeking employment and not seeking employment in 2010 may be explained by survey format differences.

Table C2: Academic Chemists Demographics (Gender and Age) 1985–2010

		Year					
	Academic Chemists (%)	1985	1990	1995	2000	2005	2010
Gender	Men	83.7	81.6	76.7	74.3	71.4	66.6
	Women	16.3	18.4	23.3	25.7	28.6	33.4
	Total	100	100	100	100	100	100
	Number Responding	9,082	9,100	12,573	11,384	9,111	11,268
Age	20-29	7.1	10.1	10.3	5.1	4.0	2.6
	30-39	25.8	25.0	26.9	26.4	24.3	24.4
	40-49	32.8	28.3	22.7	23.6	25.2	26.8
	50-59	22.3	25.2	27.9	29.0	26.1	25.5
	60-69	11.0	11.4	11.9	15.6	19.6	20.4
	70 or older	1.1	0	0.4	0.3	0.9	0.3
	Total	100	100	100	100	100	100
	Number Responding	9,112	9,125	12,619	11,453	9,153	11,063

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table C2 shows gender and age category breakdowns for academic chemists. As with industrial chemists, the percentage of women chemists in academic positions has been steadily increasing across the years. The age distribution of academic chemists, like the age distribution for industrial chemists, has been trending older, a fact that is also demonstrated by subsequent tables C5 and C9.

Table C3: Academic Chemists Demographics (Marriage and Family) 1985–2010

		Year					
	Academic Chemists (%)	1985	1990	1995	2000	2005	2010
Marital Status	Single	20.8	21.1	22.4	19.7	19.7	19.2
	Married/Partnered	79.2	78.9	77.6	80.3	80.3	80.8
	Total	100	100	100	100	100	100
	Number Responding	9,080	9,088	12,399	11,453	9,083	11,285
	Of All Married/Partnered						
	To Chemist	14.0	15.9	17.4	18.8	19.5	18.8
	To Non-chemist Scientist	15.8	16.8	18.8	20.9	20.5	20.7
	To Non-scientist	70.2	67.4	63.8	60.3	60.0	60.5

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table C4: Academic Chemists Demographics (Citizenship, Race/Ethnicity) 1985–2010

		Year					
	Academic Chemists (%)	1985	1990	1995	2000	2005	2010
Citizenship	U.S. Native	86.8	85.5	79.7	78.5	79.3	74.6
	U.S. Naturalized	7.1	6.9	7.4	8.8	8.1	10.3
	Permanent Resident	4.6	4.8	8.5	6.9	6.2	9.5
	Other Visa Status	1.5	2.8	4.4	5.8	6.4	5.6
	Total	100	100	100	100	100	100
	Number Responding	9,101	9,108	12,551	11,400	9,114	11,314
Ethnicity/Race	Hispanic	0.7	1.4	2.6	3.1	3.3	3.8
	Non-hispanic						
	White	92.0	90.7	84.1	84.6	84.8	79.3
	Black/African American	1.2	1.1	1.4	1.7	1.9	2.5
	American Indian	0.1	0.2	0.2	0.1	0.2	0.1
	Asian	5.2	6.2	10.6	9.5	9.1	11.6
	Other or Multiracial	0.8	0.5	1.2	0.9	0.7	2.7
	Total	100	100	100	100	100	100
	Number Responding	9,039	8,684	12,429	10,402	9,023	11,117

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table C5: Academic Chemists (Age by Gender) 1985–2010

	Year					
Men (%)	1985	1990	1995	2000	2005	2010
20-29	6.1	8.5	8.3	3.8	2.9	1.8
30-39	24.5	23.5	24.6	23.6	22.2	22.9
40-49	33.2	28.4	22.5	22.8	23.8	25.5
50-59	23.5	27.3	30.4	31.1	27.0	25.4
60-69	11.7	12.3	13.8	18.4	23.4	24.0
70 or older	1.0	0	0.4	0.3	0.7	0.4
Total	100	100	100	100	100	100
Number Responding	7,601	7,428	9,638	8,453	6,509	7,356

Women (%)	1985	1990	1995	2000	2005	2010
20-29	12.0	17.0	16.6	7.9	6.6	4.2
30-39	32.5	31.9	34.7	34.5	29.8	27.5
40-49	30.8	28.0	23.4	26.1	28.6	29.4
50-59	16.0	15.7	19.5	23.5	24.2	25.7
60-69	7.1	7.4	5.6	7.9	10.0	13.1
70 or older	1.6	0.1	0.2	0	0.8	0.1
Total	100	100	100	100	100	100
Number Responding	1,481	1,672	2,925	2,931	2,602	3,647

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table C6: Academic Chemists (Citizenship by Gender) 1985–2010

	Year					
Men (%)	1985	1990	1995	2000	2005	2010
U.S. Native	86.5	85.0	79.2	78.2	78.7	73.3
U.S. Naturalized	7.1	6.9	7.4	8.5	8.0	10.3
Permanent Resident	4.9	5.1	8.9	7.2	6.4	10.3
Other Visa Status	1.6	3.0	4.5	6.0	6.9	6.2
Total	100	100	100	100	100	100
Number Responding	7,593	7,419	9,591	8,430	6,489	7,488

Women (%)	1985	1990	1995	2000	2005	2010
U.S. Native	88.4	87.4	81.0	79.4	81.0	77.3
U.S. Naturalized	7.1	7.1	7.5	9.8	8.2	10.5
Permanent Resident	3.4	3.7	7.3	5.9	5.7	8.0
Other Visa Status	1.1	1.8	4.2	5.0	5.2	4.2
Total	100	100	100	100	100	100
Number Responding	1,479	1,671	2,916	2,923	2,600	3,748

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table C6 shows a decline in U.S. native-born citizens as a percentage of chemists in academia. Permanent resident and other visa status categories have increased relative to U.S. native-born citizens. These, too, are twenty-five year trends, consistent with what we observe for industrial chemists.

Table C7: Academic Chemists (Ethnicity by Gender) 1985–2010

Men (%)	Year					
	1985	1990	1995	2000	2005	2010
Hispanic	0.7	1.2	2.3	2.6	2.8	3.5
Non-hispanic						
White	92.0	90.8	84.2	85.0	85.2	78.9
Black/African American	1.2	1.0	1.3	1.6	1.8	2.4
American Indian	0.2	0.2	0.2	0.1	0.2	0.1
Asian	5.2	6.4	10.7	9.7	9.3	12.3
Other	0.7	0.5	1.3	1.0	0.7	1.1
Multiracial	—	—	—	—	—	1.7
Total	100	100	100	100	100	100
Number Responding	7,538	7,064	9,493	7,667	6,422	7,349

Women (%)	1985	1990	1995	2000	2005	2010
Hispanic	0.8	2.4	3.4	4.3	4.3	4.5
Non-hispanic						
White	92.1	90.5	83.7	83.7	84.1	80.1
Black/African American	1.0	1.3	1.5	2.1	2.0	2.6
American Indian	0.1	0.2	0.1	0.3	0.3	0.2
Asian	5.0	5.2	10.2	9.1	8.5	10.1
Other	1.0	0.4	1.0	0.6	0.7	0.9
Multiracial	—	—	—	—	—	1.6
Total	100	100	100	100	100	100
Number Responding	1,475	1,603	2,903	2,704	2,583	3,707

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table C7 shows trends in ethnicity across the ChemCensus years. Black/African American academic chemists, like industrial chemists, continue to be in the minority, with only 2.4 percent of men and 2.6 percent of women identifying themselves as being Black/African American in 2010. Hispanics are increasing as a percentage of industrial chemists, but these percentages remain low, with only 3.5 percent of men identifying themselves as being Hispanic and only 4.5 percent of women in 2010. The multiracial category was introduced in 2010, making precise twenty-five-year comparisons difficult.

Table C8: Academic Chemists (Marriage and Family by Gender) 1985–2010

		Year					
	Men (%)	1985	1990	1995	2000	2005	2010
Marital Status	Single	17.2	17.8	19.1	16.2	16.6	16.2
	Married/Partnered	82.8	82.2	80.9	83.8	83.4	83.8
	Total	100	100	100	100	100	100
	Number Responding	7,573	7,406	9,476	8,453	6,468	7,467
	Of All Married/Partnered						
	To Chemist	11.0	12.6	13.7	14.6	15.7	15.1
	To Non-chemist Scientist	13.8	14.8	16.0	18.6	18.1	18.2
	To Non-scientist	75.2	72.6	70.3	66.8	66.2	66.7

	Women (%)	1985	1990	1995	2000	2005	2010
Marital Status	Single	38.3	36.2	33.4	30.2	27.5	25.1
	Married/Partnered	61.7	63.8	66.6	69.8	72.5	74.9
	Total	100	100	100	100	100	100
	Number Responding	1,479	1,665	2,885	2,931	2,590	3,743
	Of All Married/Partnered						
	To Chemist	34.7	34.8	32.4	33.3	30.8	27.1
	To Non-chemist Scientist	29.1	28.0	29.6	28.9	27.4	26.1
	To Non-scientist	36.1	37.2	38.0	37.8	41.8	46.8

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table C9: Academic Chemists, Full-Time Workers Mean Age by Demographic Group 1985–2010

		Year					
	Academic Full-time Worker (Mean Age)	1985	1990	1995	2000	2005	2010
Gender	All Chemists	45.5	44.4	44.8	46.9	48.1	48.4
	Men	46.0	45.3	46.1	48.3	49.3	49.5
	Women	42.8	40.5	40.8	43.2	44.9	46.1
Ethnicity	Hispanic	43.1	40.7	41.5	43.5	44.7	45.7
	Non-hispanic						
	White	45.6	44.7	45.7	47.5	48.7	49.2
	Black/African American	46.9	41.6	43.7	45.3	46.6	48.0
	American Indian	43.8	44.2	44.2	44.8	52.6	50.3
	Asian	42.8	40.1	39.7	42.2	42.5	43.3
	Other	43.4	41.9	41.0	46.7	45.5	49.4
	Multiracial	—	—	—	—	—	47.6
Citizenship	U.S. Native	45.5	44.6	45.6	47.8	49.0	49.3
	U.S. Naturalized	51.0	49.5	50.4	51.7	52.3	52.6
	Permanent Resident	40.6	40.0	39.8	41.8	42.4	43.1
	Other Visa Status	32.8	32.1	32.7	34.7	36.2	36.3
Highest Degree	Associate Degree	—	—	37.4	38.3	48.7	56.3
	Bachelor's Degree	38.0	36.8	32.9	39.8	40.9	42.1
	Master's Degree	45.2	44.5	44.0	46.6	48.8	49.9
	Doctorate	45.8	44.7	46.0	47.3	48.5	48.4
	Other Professional Degree	47.5	52.6	41.8	50.0	50.4	53.7

Note. A long dash within a cell indicates that summary data are unavailable.

Table C10: Academic Chemists, Full-Time Workers Mean Age by Employment Group 1985–2010

		Year					
	Academic Full-time Worker (Mean Age)	1985	1990	1995	2000	2005	2010
Institution Type	High School	45.0	43.5	45.7	46.5	48.0	49.1
	AA-Granting	46.8	47.2	48.9	49.4	50.7	50.7
	BS-Granting	46.1	45.7	46.4	46.9	47.6	47.5
	MS-Granting	47.3	46.6	47.5	48.0	48.9	49.5
	PhD-Granting	46.5	45.1	46.3	47.8	49.3	49.5
	Medical School	46.9	45.2	47.8	49.5	50.5	51.4
Institutional Control	Public	46.7	45.7	47.0	48.1	49.2	49.6
	Private	46.0	44.9	46.2	47.3	48.7	48.5
Academic Rank	Full Professor	52.4	52.0	54.1	55.6	56.7	56.6
	Associate Professor	44.8	44.0	45.5	46.1	46.8	47.2
	Assistant Professor	36.0	34.3	36.6	37.3	38.9	39.5
	Visitor/Instructor/Adjunct Professor	40.1	40.7	41.7	44.0	46.7	47.3
	Non-teaching Research Appointment	38.8	38.2	39.4	42.5	44.0	46.4
	Other Non-faculty Appointment	—	40.9	41.2	44.6	46.9	46.7
	No Ranks	45.3	44.4	46.1	48.8	47.6	49.0
	Secondary Teacher	—	—	—	46.2	48.0	49.1
	Administrator	—	—	—	—	—	53.4

Note. A long dash within a cell indicates that summary data are unavailable.

Academic Chemists: Education

Tables for education in this section of the report summarize data for all academic chemists, regardless of employment status during the week of March 1, 2010.

Table C11 provides a summary of highest degrees earned by academic chemists responding the ChemCensus surveys. Here we see a much higher percentages of academic chemists holding doctoral degrees than we observed with industrial chemists.

Table C11: Education (Highest Degree Received) 1985–2010

	Year					
Academic Chemists (%)	1985	1990	1995	2000	2005	2010
Associate Degree	—	—	0.1	0.1	0.1	0
Bachelor's Degree	3.6	4.0	6.9	4.5	4.9	4.3
Master's Degree	11.1	10.7	12.0	11.6	11.7	11.3
Doctorate	84.8	84.9	80.6	83.1	82.6	83.8
Other	0.5	0.4	0.4	0.8	0.6	0.6
Total	100	100	100	100	100	100
Number Responding	9,112	9,125	12,524	11,453	9,153	11,520

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table C12: Academic Chemists (Highest Degree by Gender) 1985–2010

	Year					
Men (%)	1985	1990	1995	2000	2005	2010
Associate Degree	—	—	0.1	0.1	0.1	<0.1
Bachelor's Degree	2.5	3.0	5.3	3.6	3.7	3.1
Master's Degree	8.4	7.9	8.7	8.4	8.4	7.4
Doctorate	88.5	88.7	85.5	87.1	87.2	88.7
Other	0.5	0.4	0.4	0.8	0.6	0.8
Total	100	100	100	100	100	100
Number Responding	7,601	7,428	9,565	8,453	6,509	7,509

Women (%)	1985	1990	1995	2000	2005	2010
Associate Degree	—	—	0	0.1	0.1	0.1
Bachelor's Degree	9.3	8.4	12.3	7.3	7.9	6.8
Master's Degree	24.5	23.1	22.6	20.8	20.0	19.1
Doctorate	65.7	67.9	64.5	71.2	71.3	73.7
Other	0.5	0.6	0.6	0.6	0.7	0.3
Total	100	100	100	100	100	100
Number Responding	1,481	1,672	2,906	2,931	2,602	3,762

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

When we look at men and women separately, as shown in Table C12, we see higher percentages of academic men than women holding doctorates. Among academicians responding to the 2010 ChemCensus, 88.7 percent of men held doctorates, while 73.7 percent of women held doctorates.

Table C13: Academic Chemists (Years of Experience) 1985–2010

	Year					
All Academic Chemists (%)	1985	1990	1995	2000	2005	2010
0–1 Years	0.3	0.3	3.0	0	0.5	0.5
2–4 Years	1.1	1.1	11.2	1.4	0.8	1.1
5–9 Years	9.7	10.6	15.2	6.9	6.4	5.5
10–14 Years	12.5	13.6	11.5	14.1	13.2	14.1
15–19 Years	13.9	11.8	10.1	13.8	13.0	13.8
20–24 Years	18.5	12.9	12.1	11.2	12.8	12.6
25–29 Years	14.6	17.2	15.6	10.8	11.9	13.3
30–34 Years	12.3	13.6	11.5	13.6	11.9	12.3
35–39 Years	9.3	10.8	9.8	15.6	13.2	11.4
40 Years or More	7.8	8.1	0	12.5	16.3	15.4
Total	100	100	100	100	100	100
Number Responding	9,065	8,077	12,359	11,393	9,145	10,871

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Tables C13 and C14 show years of experience, which we define as years since earning a bachelor's degree. Distributional changes for this demographic are consistent with the trend in ages observed earlier for industrial chemists.

Table C14: Academic Chemists (Years of Experience by Gender) 1985–2010

	Year					
Men (%)	1985	1990	1995	2000	2005	2010
0–1 Years	0.2	0.2	2.4	0	0.3	0.3
2–4 Years	0.8	0.7	9.5	0.9	0.5	0.7
5–9 Years	8.9	9.0	13.9	5.7	5.2	4.8
10–14 Years	11.8	12.7	10.6	12.5	12.1	13.3
15–19 Years	13.3	11.2	9.9	12.7	12.0	13.3
20–24 Years	18.5	12.8	12.6	10.7	11.9	11.5
25–29 Years	15.3	17.9	16.7	10.7	11.7	12.6
30–34 Years	13.5	14.6	13.0	14.4	11.9	12.3
35–39 Years	9.5	12.3	11.3	17.8	14.7	12.5
40 Years or More	8.2	8.6	0	14.6	19.6	18.6
Total	100	100	100	100	100	100
Number Responding	7,561	6,582	9,464	8,409	6,503	7,086

Women (%)	1985	1990	1995	2000	2005	2010
0–1 Years	0.7	0.7	5.1	0	1.0	0.8
2–4 Years	2.9	2.6	17.0	2.8	1.4	1.7
5–9 Years	13.8	17.9	19.5	10.3	9.3	7.0
10–14 Years	16.2	17.4	14.4	18.7	16.2	15.8
15–19 Years	16.7	14.8	10.9	17.2	15.5	15.0
20–24 Years	18.4	13.4	10.5	12.5	15.1	14.4
25–29 Years	11.3	13.8	11.6	11.1	12.3	14.9
30–34 Years	6.2	8.9	6.2	11.3	11.9	12.1
35–39 Years	8.0	4.4	4.7	9.5	9.3	9.4
40 Years or More	5.8	6.2	0	6.5	7.9	8.9
Total	100	100	100	100	100	100
Number Responding	1,474	1,478	2,842	2,918	2,600	3,568

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Academic Chemists: Employment and Salaries

Salaries are the focus of the last section of the report for academic chemists, with the majority of tables showing reported annual salaries of full-time employed academic chemists in nominal dollars. The final table shows salaries converted to real dollars.

We should note, as well, that every category of salary (that is, by gender, years of experience, or highest degree earned) shows lower salaries in academia than in industry. These salary differences are substantial.

Tables for employment and salary are constructed using data for academic chemists who are employed as full-time workers during the week of March 1, 2010. This is a subset of all academic chemists.

Table C15: Academic Chemists (Median Salary in Nominal Dollars by Gender, Years of Experience, and Highest Degree Earned) 1985–2010

		Year					
	Academic Full-time Worker Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Gender	All Chemists	33,300	43,200	50,000	56,100	64,000	68,000
	Men	35,000	45,000	53,000	60,000	69,000	73,000
	Women	26,000	34,367	39,000	46,350	54,224	60,000
Years of Experience	2–4	16,450	21,600	32,000	30,000	33,160	34,176
	5–9	22,500	29,000	38,000	39,000	45,000	48,000
	10–14	26,000	34,000	44,000	43,500	50,500	57,000
	15–19	29,000	37,000	48,455	48,600	55,070	62,000
	20–24	34,000	42,000	53,000	54,350	62,000	66,682
	25–29	36,300	47,000	59,000	59,370	66,800	72,000
	30–34	40,000	50,535	62,263	63,000	70,222	75,000
	35–39	40,000	52,000	67,536	70,000	76,400	80,000
	40 or More	47,000	58,078	—	76,000	88,000	94,000
Highest Degree	Bachelor's Degree	20,000	26,982	27,000	36,000	42,000	40,000
	Master's Degree	26,900	34,500	40,000	45,000	52,000	53,245
	Doctorate	35,000	45,000	52,588	60,000	67,817	72,000
	Other Professional Degree	36,500	43,500	50,000	60,843	60,000	72,500

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table C16: Academic Chemists (Median Salary in Nominal Dollars by Institution Type, Institution Control, and Academic Rank) 1985–2010

	Academic Full-time Worker Median Salary (Nominal Dollars)	Year					
		1985	1990	1995	2000	2005	2010
Institution Type	High School	26,350	33,000	39,000	43,000	50,000	53,800
	AA-Granting	30,000	40,000	45,000	48,500	54,600	60,000
	BS-Granting	27,900	37,000	42,253	48,433	54,000	60,000
	MS-Granting	33,600	43,000	49,400	54,000	62,000	65,000
	PhD-Granting	38,000	49,293	55,100	65,444	76,500	82,000
	Medical School	40,000	50,000	65,000	72,500	84,500	96,000
Institutional Control	Private	30,000	40,000	48,000	53,261	61,700	66,000
	Public	34,900	45,000	50,500	57,838	65,000	69,500
Academic Rank	Full Professor	42,000	55,000	66,000	78,100	90,000	98,000
	Associate Professor	31,000	41,000	48,000	53,000	60,000	67,000
	Assistant Professor	25,000	33,938	38,586	44,553	51,400	56,737
	Visitor/Instructor/Adjunct	23,000	30,300	33,000	40,000	45,600	46,500
	Research Appointment	24,500	33,000	35,907	48,500	56,800	63,012
	Other Non-faculty	—	33,300	35,000	46,000	57,000	51,000
	No Ranks	29,000	35,000	40,000	46,200	51,162	58,000
	Secondary Teacher	—	—	—	42,689	50,000	53,000
	Administrator	—	—	—	—	—	104,000

Note. A long dash within a cell indicates that summary data are unavailable.

Table C17: Academic Chemists (Median Salary in Nominal Dollars by Geographic Region and Highest Degree Earned) 1985–2010

	Academic Full-time Worker Median Salary (Nominal Dollars)	Year					
		1985	1990	1995	2000	2005	2010
Bachelor's Degree	New England	—	25,750	22,908	37,880	43,000	50,000
	Middle Atlantic	—	31,000	32,000	36,500	44,100	44,750
	South Atlantic	—	24,500	22,500	36,600	40,000	40,000
	East North Central	—	25,000	28,590	33,280	40,914	38,975
	East South Central	—	25,750	27,450	33,170	38,752	33,500
	West North Central	—	25,000	24,000	33,500	41,550	37,000
	West South Central	—	24,000	25,000	32,850	35,000	35,000
	Mountain	—	26,000	24,600	32,000	41,300	37,456
	Pacific	—	31,650	31,500	46,000	55,000	42,562
Master's Degree	New England	—	37,000	44,866	50,000	60,000	58,700
	Middle Atlantic	—	38,200	47,550	49,300	57,000	60,000
	South Atlantic	—	31,848	33,993	41,284	46,776	51,750
	East North Central	—	36,749	40,971	48,500	54,124	52,000
	East South Central	—	28,299	30,400	37,000	40,000	45,000
	West North Central	—	29,677	36,180	44,000	47,200	48,000
	West South Central	—	27,630	31,250	38,000	45,000	46,000
	Mountain	—	30,000	34,748	37,838	49,500	52,313
	Pacific	—	41,000	45,000	52,000	59,360	62,000
Doctorate	New England	—	50,000	57,500	64,515	74,000	80,350
	Middle Atlantic	—	48,000	57,674	64,000	70,000	74,520
	South Atlantic	—	45,000	51,526	59,600	67,425	70,000
	East North Central	—	45,000	52,700	58,941	65,556	70,000
	East South Central	—	40,000	48,000	51,895	58,858	65,000
	West North Central	—	42,000	48,976	54,540	60,475	67,466
	West South Central	—	42,000	49,000	56,000	65,000	68,000
	Mountain	—	42,000	52,112	58,000	69,000	75,000
	Pacific	—	50,050	56,000	65,000	75,000	80,000

Note. A long dash within a cell indicates that summary data are unavailable.

Table C18a: Academic Chemists with Bachelor's as Highest Degree (Median Salary in Nominal Dollars by Institution Type, Institution Control, and Academic Rank) 1985–2010

	Academic Full-time Worker with BS Median Salary (Nominal Dollars)	Year					
		1985	1990	1995	2000	2005	2010
Institution Type	High School	19,050	25,000	29,009	33,000	39,700	41,000
	AA-Granting	25,000	34,000	30,000	38,086	41,000	42,562
	BS-Granting	21,750	28,800	36,000	42,120	44,300	39,000
	MS-Granting	34,000	35,000	28,900	41,223	50,000	45,338
	PhD-Granting	21,000	26,221	19,000	36,500	43,725	36,000
	Medical School	19,000	26,500	26,739	37,397	44,538	40,484
Institutional Control	Private	18,400	28,000	28,040	37,000	41,000	36,149
	Public	20,900	26,000	25,350	35,000	41,000	42,088
Academic Rank	Full Professor	42,500	30,000	58,400	38,173	16,000	103,049
	Associate Professor	35,600	48,000	53,800	27,000	20,000	—
	Assistant Professor	20,000	34,000	28,500	57,698	—	44,250
	Visitor/Instructor/Adjunct	18,950	23,000	26,600	42,120	43,725	45,500
	Research Appointment	20,000	28,000	19,000	35,658	50,000	37,000
	Other Non-faculty	—	25,250	23,100	35,000	42,000	36,000
	No Ranks	20,000	25,600	29,610	36,000	48,665	40,000
	Secondary Teacher	—	—	—	32,000	39,308	42,025
	Administrator	—	—	—	—	—	57,200

Note. A long dash within a cell indicates that summary data are unavailable or sample sizes smaller than 5.

Table C18 is a three-part table, showing median annual salaries broken down by primary work function. The three parts, labeled A, B, and C, show salaries for academic chemists whose highest degrees are bachelor's, master's, and doctoral degrees, respectively.

Table C18b: Academic Chemists with Master's as Highest Degree (Median Salary in Nominal Dollars by Institution Type, Institution Control, and Academic Rank) 1985–2010

		Year					
	Academic Full-time Worker with MS Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Institution Type	High School	27,000	33,555	41,000	47,532	53,000	55,000
	AA-Granting	30,000	39,100	43,926	46,000	50,000	54,000
	BS-Granting	22,000	30,000	32,000	38,800	41,000	47,000
	MS-Granting	25,250	36,000	36,000	45,270	55,000	49,184
	PhD-Granting	25,300	32,000	35,000	47,536	55,000	55,280
	Medical School	26,000	32,000	35,150	44,500	54,248	59,000
Institutional Control	Private	22,000	30,000	35,000	40,568	47,100	50,003
	Public	28,500	36,000	41,000	46,000	52,000	55,000
Academic Rank	Full Professor	35,000	46,762	53,056	60,000	66,806	63,073
	Associate Professor	28,300	38,500	44,000	46,790	53,000	58,134
	Assistant Professor	23,000	30,100	31,667	38,200	42,500	45,000
	Visitor/Instructor/Adjunct	21,000	29,370	31,050	34,000	42,000	43,100
	Research Appointment	24,100	29,500	31,500	43,364	51,400	51,910
	Other Non-faculty	—	30,000	35,000	43,500	52,000	50,000
	No Ranks	28,000	35,160	41,000	44,800	49,500	54,000
	Secondary Teacher	—	—	—	47,535	53,000	54,900
	Administrator	—	—	—	—	—	61,000

Note. A long dash within a cell indicates that summary data are unavailable or sample sizes smaller than 5.

Table C18c: Academic Chemists with Doctorate as Highest Degree (Median Salary in Nominal Dollars by Institution Type, Institution Control, and Academic Rank)
1985–2010

		Year					
	Academic Full-time Worker with PHD Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Institution Type	High School	31,000	36,000	40,000	42,150	53,000	61,000
	AA-Granting	31,100	41,000	45,785	50,000	57,000	62,004
	BS-Granting	28,000	37,500	43,157	49,208	55,000	60,000
	MS-Granting	34,100	44,000	50,000	55,400	63,384	66,000
	PhD-Granting	39,000	50,000	58,300	68,000	80,000	84,000
	Medical School	42,000	53,000	68,067	75,000	89,900	100,000
Institutional Control	Private	32,000	42,000	50,000	55,416	64,446	69,000
	Public	36,000	47,565	54,000	61,500	70,000	74,636
Academic Rank	Full Professor	42,000	55,000	67,000	79,000	90,000	99,500
	Associate Professor	31,700	41,000	48,000	53,000	60,000	67,000
	Assistant Professor	25,300	34,000	39,000	45,000	52,000	57,500
	Visitor/Instructor/Adjunct	24,000	32,000	34,530	40,276	47,550	47,000
	Research Appointment	27,000	35,000	40,000	50,123	59,000	65,000
	Other Non-faculty	—	39,000	44,250	54,000	68,500	60,000
	No Ranks	33,000	39,063	44,000	51,749	5,4029	63,096
	Secondary Teacher	—	—	—	41,251	53,375	60,000
	Administrator	—	—	—	—	—	116,000

Note. A long dash within a cell indicates that summary data are unavailable or sample sizes smaller than 5.

Table C19a: Academic Chemists with All Degrees (Median Salary in Nominal Dollars by Gender and Years of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Men	2–4 Years	17,000	21,836	33,000	30,000	33,400	35,000
	5–9 Years	23,000	30,000	38,650	40,042	45,800	50,000
	10–14 Years	26,500	34,282	45,000	45,000	52,000	60,000
	15–19 Years	30,000	38,750	50,500	50,000	57,000	64,878
	20–24 Years	35,000	44,000	55,300	57,550	64,000	70,000
	25–29 Years	38,000	48,500	60,125	62,701	70,000	78,000
	30–34 Years	40,000	52,000	63,940	66,016	75,000	82,000
	35–39 Years	41,000	53,000	70,000	71,800	80,448	85,795
	40 or More Years	50,000	60,000	—	79,800	90,000	99,320
Women	2–4 Years	16,000	21,000	30,948	30,000	33,160	32,912
	5–9 Years	20,000	28,000	36,000	37,600	43,750	45,000
	10–14 Years	23,000	34,000	40,000	41,400	49,000	54,000
	15–19 Years	25,000	32,400	40,350	45,800	53,000	58,395
	20–24 Years	28,500	36,500	42,600	46,900	59,000	62,000
	25–29 Years	30,000	35,325	47,000	50,000	57,000	64,000
	30–34 Years	29,000	40,750	49,750	52,000	61,208	62,906
	35–39 Years	30,450	40,000	53,156	58,542	61,000	67,455
	40 or More Years	33,750	45,312	—	59,000	70,616	73,279

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table C19 is a four-part table, showing median annual salaries broken down by years of experience, defined as the number of years since earning a bachelor's degree. Part A shows median salaries for all academic chemists. And the parts labeled B, C, and D show salaries for academic chemists whose highest degrees are bachelor's, master's, and doctoral degrees, respectively.

Table C19b: Academic Chemists with Bachelor's Degree as Highest Degree (Median Salary in Nominal Dollars by Gender and Years of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Men	2–4 Years	16,000	21,636	25,250	29,688	32,500	34,176
	5–9 Years	18,000	25,000	32,000	37,843	41,000	37,475
	10–14 Years	22,100	28,250	36,000	41,371	39,000	47,676
	15–19 Years	23,700	33,000	38,000	43,123	50,551	42,150
	20–24 Years	26,500	32,000	45,000	42,300	54,000	52,000
	25–29 Years	31,000	44,820	47,000	45,000	46,000	54,400
	30–34 Years	29,000	42,000	63,750	51,000	55,000	49,420
	35–39 Years	40,000	40,000	53,000	48,000	50,000	53,496
	40 or More Years	27,900	38,600	—	43,812	63,750	36,000
Women	2–4 Years	15,500	20,000	25,000	29,300	31,555	30,000
	5–9 Years	17,150	24,150	27,528	34,800	40,000	40,000
	10–14 Years	20,000	25,000	29,610	35,412	42,000	42,644
	15–19 Years	22,250	26,800	32,000	35,644	43,550	36,750
	20–24 Years	20,000	27,000	31,000	30,500	41,000	49,000
	25–29 Years	30,000	28,000	37,500	30,080	40,000	45,000
	30–34 Years	24,500	34,500	35,000	38,810	40,828	43,500
	35–39 Years	25,350	21,834	27,000	57,110	55,000	55,748
	40 or More Years	26,250	26,500	—	36,600	70,500	45,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table C19c: Academic Chemists with Master's Degree as Highest Degree (Median Salary in Nominal Dollars by Gender and Years of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Men	2–4 Years	22,500	30,000	26,300	30,000	38,750	38,000
	5–9 Years	19,000	25,250	34,000	35,000	45,000	45,000
	10–14 Years	24,050	29,000	35,000	40,000	44,956	53,000
	15–19 Years	25,950	32,000	40,050	46,950	48,606	57,368
	20–24 Years	30,000	37,000	43,000	46,000	56,000	50,100
	25–29 Years	31,500	40,600	51,000	52,000	56,000	60,750
	30–34 Years	33,000	42,920	50,200	52,000	58,500	60,000
	35–39 Years	32,000	43,000	52,000	54,088	55,344	65,000
	40 or More Years	32,000	44,074	—	56,090	60,000	63,000
Women	2–4 Years	17,000	23,000	26,400	32,000	40,250	40,000
	5–9 Years	18,600	23,400	30,050	33,000	40,000	40,000
	10–14 Years	20,000	27,500	35,000	37,376	41,000	49,500
	15–19 Years	22,000	29,000	36,000	39,810	46,500	50,000
	20–24 Years	24,500	30,700	37,930	42,500	50,400	52,000
	25–29 Years	28,000	30,000	41,064	42,873	50,000	52,600
	30–34 Years	22,000	40,000	41,000	46,000	54,000	49,500
	35–39 Years	25,100	35,000	42,300	50,000	56,000	58,134
	40 or More Years	28,000	36,140	—	50,000	56,000	59,922

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table C19d: Academic Chemists with Doctorate as Highest Degree (Median Salary in Nominal Dollars by Gender and Years of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Men	2–4 Years	38,500	36,000	35,000	—	—	81,000
	5–9 Years	24,000	31,500	39,300	42,000	46,250	52,530
	10–14 Years	27,000	35,000	46,100	45,338	52,269	60,000
	15–19 Years	30,050	40,000	52,000	50,214	59,000	65,000
	20–24 Years	35,500	45,100	58,500	60,000	65,000	72,000
	25–29 Years	39,000	50,000	62,000	65,000	73,800	80,000
	30–34 Years	41,000	53,000	65,000	70,000	80,000	86,075
	35–39 Years	42,550	54,000	71,242	73,000	84,000	92,520
	40 or More Years	50,000	62,000	—	81,830	91,347	101,650
Women	2–4 Years	—	35,400	32,500	—	45,675	—
	5–9 Years	22,000	29,000	37,500	39,000	45,575	50,544
	10–14 Years	24,200	35,500	40,188	42,300	50,000	55,000
	15–19 Years	26,300	34,500	43,039	47,050	54,404	60,000
	20–24 Years	31,000	40,266	48,000	48,000	62,287	65,000
	25–29 Years	30,250	40,750	54,636	53,184	58,100	70,500
	30–34 Years	35,250	42,000	51,200	57,000	67,884	71,300
	35–39 Years	33,000	46,250	58,000	66,750	62,000	75,000
	40 or More Years	39,200	52,000	—	65,000	83,000	81,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table C20a: Academic Chemists (Median Salary in Nominal Dollars by Institution Type and Years of Experience) 1985–2010

	Full-time Worker Experience Median Salary (Nominal Dollars)	Year					
		1985	1990	1995	2000	2005	2010
High School	2–4 Years	15,750	20,000	27,000	30,000	33,800	40,000
	5–9 Years	18,000	22,950	32,000	32,000	37,000	41,000
	10–14 Years	20,000	26,000	33,000	35,500	42,000	52,000
	15–19 Years	25,000	30,000	40,000	40,000	47,050	53,000
	20–24 Years	29,000	33,000	41,000	43,000	51,000	53,000
	25–29 Years	30,000	37,000	45,000	45,000	50,244	59,000
	30–34 Years	32,000	40,000	46,600	49,468	55,500	53,500
	35–39 Years	30,450	37,225	44,500	54,000	55,000	60,000
	40 or More Years	34,000	37,050	—	50,575	61,000	60,000
AA-Granting Institution	2–4 Years	21,750	17,700	30,700	30,000	23,557	40,090
	5–9 Years	19,200	25,500	36,000	35,464	43,250	41,750
	10–14 Years	23,300	29,558	34,215	38,136	44,456	52,500
	15–19 Years	28,000	31,000	39,240	43,000	49,256	56,000
	20–24 Years	30,000	37,350	45,320	47,455	51,075	55,986
	25–29 Years	33,000	40,000	48,200	45,000	56,000	60,000
	30–34 Years	34,400	46,000	52,478	52,000	53,570	63,036
	35–39 Years	32,750	48,000	55,500	56,500	62,000	61,698
	40 or More Years	34,000	44,287	—	57,701	65,004	72,000
BS-Granting Institution	2–4 Years	12,300	26,000	32,000	32,000	42,000	30,000
	5–9 Years	21,000	28,000	34,500	38,000	44,000	49,500
	10–14 Years	21,700	29,690	37,900	40,000	47,000	52,457
	15–19 Years	24,000	31,000	40,000	44,000	50,000	55,390
	20–24 Years	28,100	35,000	45,000	45,345	55,000	60,000
	25–29 Years	32,000	41,000	51,000	51,000	56,156	65,000
	30–34 Years	33,050	44,200	53,000	54,060	60,218	65,000
	35–39 Years	32,000	45,000	57,830	60,492	65,000	69,700
	40 or More Years	33,050	43,505	—	63,763	72,000	78,138

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table C20b: Academic Chemists (Median Salary in Nominal Dollars by Institution Type and Year of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
MS-Granting Institution	2–4 Years	20,000	22,700	34,500	33,993	56,000	—
	5–9 Years	23,250	29,500	36,422	40,156	47,000	44,600
	10–14 Years	25,000	32,088	39,900	42,500	49,000	54,212
	15–19 Years	28,300	34,715	44,500	47,123	54,300	58,600
	20–24 Years	34,200	40,000	50,015	50,400	60,174	65,000
	25–29 Years	36,000	45,000	59,342	51,093	69,000	77,175
	30–34 Years	37,500	50,000	60,264	60,000	65,000	78,000
	35–39 Years	37,750	49,864	60,000	70,000	75,952	71,000
	40 or More Years	40,000	52,500	—	70,000	82,000	89,000
PhD-Granting Institution	2–4 Years	18,000	20,908	32,000	22,500	30,000	24,500
	5–9 Years	25,000	32,000	41,500	46,448	52,250	60,500
	10–14 Years	28,000	37,000	48,675	50,000	58,886	68,000
	15–19 Years	32,500	42,396	54,500	53,322	65,000	71,731
	20–24 Years	39,350	50,000	64,000	64,750	71,000	80,000
	25–29 Years	43,750	57,355	71,500	69,950	82,000	85,400
	30–34 Years	45,000	59,500	72,762	77,580	84,000	96,000
	35–39 Years	45,000	62,000	78,000	85,000	95,000	103,600
	40 or More Years	51,000	65,500	—	89,903	108,000	118,000
Medical School	2–4 Years	16,000	20,017	35,500	25,500	26,500	33,025
	5–9 Years	20,500	29,854	45,000	43,000	44,064	59,000
	10–14 Years	30,000	39,000	54,000	55,000	65,000	70,000
	15–19 Years	33,000	42,000	62,250	60,000	70,000	82,000
	20–24 Years	40,000	50,000	69,400	70,000	76,000	86,650
	25–29 Years	46,250	62,000	80,000	73,250	86,000	90,000
	30–34 Years	50,000	59,100	79,750	85,000	93,445	109,000
	35–39 Years	50,000	64,000	88,000	98,000	100,566	121,000
	40 or More Years	62,500	67,500	—	94,476	125,000	157,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table C21: Academic Chemists (Median Salary in Nominal Dollars by Institutional control Type and years of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Public Institution	2–4 Years	16,400	21,636	31,500	30,000	33,480	35,850
	5–9 Years	23,000	29,500	38,000	39,480	45,000	48,500
	10–14 Years	26,600	34,500	44,000	45,000	50,600	58,000
	15–19 Years	30,000	38,000	48,950	48,880	56,305	62,660
	20–24 Years	35,000	44,000	55,000	55,000	62,000	68,000
	25–29 Years	38,000	49,000	60,000	59,000	67,000	72,150
	30–34 Years	40,000	52,000	62,998	65,000	70,568	75,000
	35–39 Years	40,000	53,100	67,000	71,688	80,000	80,000
	40 or More Years	48,000	60,000	—	77,700	89,530	97,000
Private Institution	2–4 Years	16,300	20,508	32,750	30,000	32,000	32,400
	5–9 Years	21,500	28,500	37,622	38,000	43,500	47,000
	10–14 Years	24,500	33,700	45,000	42,000	50,000	55,000
	15–19 Years	26,500	35,000	48,000	48,000	53,000	60,500
	20–24 Years	30,500	39,600	50,000	52,000	60,842	65,000
	25–29 Years	34,000	41,000	55,643	59,600	65,000	70,804
	30–34 Years	38,500	46,412	60,000	60,000	70,000	76,116
	35–39 Years	39,100	49,000	68,000	64,600	72,000	78,584
	40 or More Years	45,000	55,000	—	75,000	81,829	90,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table C22a: Academic Chemists (Median Salary in Nominal Dollars by Academic Rank and Year of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Full Professor	2–4 Years	55,000	—	26,550	38,500	—	52,000
	5–9 Years	20,000	—	56,225	53,342	46,000	56,218
	10–14 Years	40,000	50,000	57,799	38,173	53,100	58,285
	15–19 Years	38,500	53,750	60,325	70,604	72,000	75,500
	20–24 Years	39,000	52,500	65,000	73,945	82,000	84,000
	25–29 Years	40,500	52,225	65,000	74,000	86,000	90,910
	30–34 Years	43,000	55,000	67,250	77,800	86,151	98,000
	35–39 Years	43,000	55,000	73,500	77,000	90,000	102,000
	40 or More Years	50,000	62,500	—	84,544	96,800	108,000
Associate Professor	2–4 Years	—	36,000	47,588	27,000	—	40,090
	5–9 Years	30,000	48,000	45,000	41,000	45,170	52,000
	10–14 Years	30,000	40,000	48,000	49,100	51,000	58,185
	15–19 Years	30,000	39,650	47,000	52,000	57,312	65,317
	20–24 Years	31,700	40,000	49,000	54,167	62,000	67,000
	25–29 Years	32,000	40,800	46,490	53,184	59,875	69,578
	30–34 Years	33,000	42,000	50,000	54,250	63,000	70,000
	35–39 Years	32,000	44,505	54,540	54,300	63,500	66,000
	40 or More Years	33,300	40,200	—	55,510	64,568	70,000
Assistant Professor	2–4 Years	21,000	—	36,000	17,314	45,675	58,750
	5–9 Years	24,900	31,900	38,700	40,893	47,000	51,750
	10–14 Years	25,500	34,215	40,500	44,820	51,000	59,000
	15–19 Years	25,000	33,272	38,500	45,750	54,000	60,000
	20–24 Years	25,100	33,500	38,500	46,260	53,000	56,000
	25–29 Years	27,700	31,750	38,230	45,000	52,500	54,000
	30–34 Years	27,050	35,142	39,719	43,265	50,000	51,000
	35–39 Years	25,350	29,000	39,000	40,000	45,000	50,500
	40 or More Years	24,600	31,000	—	46,000	49,000	51,158

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table C22b: Academic Chemists (Median Salary in Nominal Dollars by Academic Rank and Years of Experience) 1985–2010

	Full-time Worker Experience Median Salary (Nominal Dollars)	Year 1985	1990	1995	2000	2005	2010
Visitor/Instructors/Adjunct Professor	2–4 Years	15,000	23,500	29,000	30,000	—	26,000
	5–9 Years	20,000	27,000	33,000	35,000	42,000	43,000
	10–14 Years	22,000	29,500	33,000	36,000	49,000	47,000
	15–19 Years	24,000	32,000	37,000	40,050	47,000	44,500
	20–24 Years	28,400	32,750	35,000	39,980	44,362	45,000
	25–29 Years	27,350	33,400	43,250	42,000	43,000	46,000
	30–34 Years	25,000	38,000	42,000	43,000	49,404	57,750
	35–39 Years	26,000	40,000	50,000	45,250	46,500	44,000
	40 or More Years	24,000	28,786	—	48,000	52,000	46,500
Research Appointment	2–4 Years	16,400	22,100	26,000	29,000	31,580	28,000
	5–9 Years	19,000	25,050	32,000	40,000	43,400	61,000
	10–14 Years	24,100	32,400	40,188	40,000	51,750	55,000
	15–19 Years	29,000	36,000	45,062	46,000	54,700	64,000
	20–24 Years	26,350	40,500	49,500	48,516	54,000	64,950
	25–29 Years	30,000	39,500	45,000	52,000	60,000	62,292
	30–34 Years	28,500	29,000	40,000	58,595	63,738	72,142
	35–39 Years	29,850	61,950	47,100	59,778	74,000	88,483
	40 or More Years	31,000	38,627	—	58,000	79,300	76,000
Other Non-Faculty	2–4 Years	—	20,008	23,000	21,962	32,000	26,000
	5–9 Years	—	24,150	32,000	35,000	42,000	37,975
	10–14 Years	—	30,000	37,919	40,000	52,000	45,952
	15–19 Years	—	33,650	37,800	46,103	54,842	53,000
	20–24 Years	—	37,000	42,609	50,000	53,800	53,500
	25–29 Years	—	43,870	53,630	55,150	60,000	63,000
	30–34 Years	—	44,800	54,000	47,250	63,500	56,000
	35–39 Years	—	46,750	60,524	63,100	70,000	55,000
	40 or More Years	—	55,700	—	60,000	82,000	65,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table C22c: Academic Chemists (Median Salary in Nominal Dollars by Academic Rank and Years of Experience) 1985–2010

		Year					
	Full-time Worker Experience Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
No Rank	2–4 Years	16,150	21,300	28,295	28,200	28,500	42,870
	5–9 Years	18,000	24,230	35,373	35,228	43,068	42,464
	10–14 Years	21,800	28,000	33,000	37,800	45,000	54,112
	15–19 Years	26,000	30,000	40,000	40,250	48,240	57,000
	20–24 Years	30,000	34,500	42,600	47,455	50,000	53,000
	25–29 Years	31,500	38,000	45,000	52,725	50,000	60,884
	30–34 Years	32,500	41,000	49,000	50,738	56,000	64,899
	35–39 Years	33,000	40,000	49,961	50,200	56,000	59,000
	40 or More Years	35000	43,000	—	55,580	56,000	68,200
Secondary School Teachers	2–4 Years	—	—	—	30,000	33,900	40,000
	5–9 Years	—	—	—	32,000	38,488	41,000
	10–14 Years	—	—	—	36,000	41,440	52,000
	15–19 Years	—	—	—	41,650	47,050	52,350
	20–24 Years	—	—	—	42,000	51,000	53,000
	25–29 Years	—	—	—	45,000	51,241	58,801
	30–34 Years	—	—	—	50,000	55,000	52,000
	35–39 Years	—	—	—	54,000	57,500	60,000
	40 or More Years	—	—	—	52,800	62,000	61,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table C23: Academic Chemists (Median Salary in Nominal Dollars by Highest Degree Earned and Years of Experience) 1985–2010

	Full-time Worker Experience Median Salary (Nominal Dollars)	Year					
		1985	1990	1995	2000	2005	2010
Bachelor's Degree is Highest Degree	2–4 Years	16,000	21,000	25,000	29500	32,000	32,700
	5–9 Years	18,000	24,500	32,000	35798	41,000	38,950
	10–14 Years	22,000	28,000	34,500	36500	40,000	44,000
	15–19 Years	23,000	31,500	36,000	41123	50,000	37,913
	20–24 Years	21,500	31,750	39,720	38371	49,000	50,000
	25–29 Years	30,000	39,181	43,477	43800	43,400	48,500
	30–34 Years	27,000	37,000	53,487	46000	50,000	47,500
	35–39 Years	35,000	36,900	33,000	55000	53,000	54,748
	40 or More Years	27,500	33,600	—	39624	68,750	43,734
Master's Degree is Highest Degree	2–4 Years	18,000	24,000	26,400	31000	40,250	40,000
	5–9 Years	18,900	24,000	32,750	34000	43,000	41,800
	10–14 Years	22,000	28,000	35,000	37500	42,600	52,000
	15–19 Years	25,000	31,000	40,000	43000	47,000	52,079
	20–24 Years	29,000	35,000	41,999	45300	51,200	51,000
	25–29 Years	30,000	36,950	46,000	47000	55,000	55,000
	30–34 Years	31,200	42,000	48,000	50052	56,000	54,900
	35–39 Years	30,000	41,600	47,500	52000	56,000	60,000
	40 or More Years	29,250	40,100	—	51600	58,632	62,000
Doctorate is Highest Degree	2–4 Years	38,500	35,700	34,186	—	45,675	81,000
	5–9 Years	24,000	30,225	38,500	40500	46,000	52,000
	10–14 Years	26,500	35,000	45,000	44819	52,000	58,000
	15–19 Years	30,000	38,625	50,122	49500	57,000	64,528
	20–24 Years	35,000	45,000	56,965	56702	64,444	69,252
	25–29 Years	38,000	49,000	61,000	62090	70,000	75,500
	30–34 Years	41,000	52,000	64,520	67500	76,318	83,254
	35–39 Years	42,000	54,000	70,000	72545	80,204	87,500
	40 or More Years	50,000	60,000	—	80000	90,000	100,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table C24: Academic Chemists (Median Salary in Real Dollars by Gender, Years of Experience, and Highest Degree Earned) 1985–2010

		Year					
	Academic Full-time Worker Median Salary (Real Dollars)	1985	1990	1995	2000	2005	2010
Gender	All Chemists	68,112	73,051	71,873	71,315	72,056	68,000
	Men	71,589	76,095	76,185	76,273	77,685	73,000
	Women	53,181	58,114	56,061	58,921	61,049	60,000
Years of Experience	2–4	33,647	36,525	45,999	38,136	37,334	34,176
	5–9	46,022	49,039	54,623	49,577	50,664	48,000
	10–14	53,181	57,494	63,248	55,298	56,857	57,000
	15–19	59,317	62,567	69,652	61,781	62,002	62,000
	20–24	69,544	71,022	76,185	69,090	69,804	66,682
	25–29	74,248	79,477	84,810	75,472	75,208	72,000
	30–34	81,816	85,454	89,500	80,086	79,061	75,000
	35–39	81,816	87,932	97,081	88,985	86,017	80,000
	40 or More	96,134	98,209	—	96,612	99,077	94,000
Highest Degree	Bachelor's Degree	40,908	45,626	38,811	45,764	47,287	40,000
	Master's Degree	55,021	58,339	57,498	57,204	58,545	53,245
	Doctorate	71,589	76,095	75,594	76,273	76,353	72,000
	Other Professional Degree	74,657	73,558	71,873	77,344	67,552	72,500

Note. A long dash within a cell indicates that summary data are unavailable. Real dollars represent nominal dollars adjusted for inflation using 2010 as the base year. Years of experience refers to years since earning a bachelor's degree.

For comparisons across the twenty-five year period of ChemCensus surveys, we rely upon the real-dollar table C24. Academic salaries have increased in real dollars over the twenty-five-year period of ChemCensus surveys, with most of this increase being associated with higher salaries at the high end of years of experience.

Women's salaries in academia are lower than men's salaries in academia. Differences between the salaries of men and women are also observed when we control for both the highest degree earned and years of experience (years since earning a bachelor's degree).

Women Chemists

This last part of our report examinining data from the American Chemical Society's ChemCensus surveys is new for 2010. While reports in previous years provided comparisons between men and women, much as we have done in earlier parts of this report, those prevous years' publications did not do extensive reporting on women. A special report on women chemists is justified by the fact that the percentage of women chemists in the organization has been steadily increasing across the years. In this part of our report, we focus upon women chemists responding to ChemCensus surveys, regardless of their employment status or principal employer. And, like other parts of this report, this part of the report is divided into three major sections: an overview of demographics, review of edcuation, and employment and salaries.

Tables in this first section, which covers demographic information, are based upon data for all women chemists.

Table D1: Women Workforce Chemists, Employment Status 1985–2010

	Year					
Women Chemists (%)	1985	1990	1995	2000	2005	2010
Employed Full-Time (35 hours/week or more)	90.6	91.9	86.9	89.8	88.7	86.2
Employed Part-Time	4.2	4.1	5.7	5.9	6.3	5.9
PostDoctoral/Other Fellowship	2.5	2.7	4.3	2.3	2.1	4.1
Seeking Employment	2.6	1.3	3.1	2.0	2.9	3.8
Total	100	100	100	100	100	100
Number Responding	6,042	6,844	10,183	10,766	8,245	10,367

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable. The percentage of chemists in the workforce and seeking employment is the unemployment rate.

Table D1 shows the employment breakdown of women responding to the employment status item. Retired women are included in the not-seeking-employment category. The percentage of women employed in full-time positions (working 35 hours a week or more) in 2010 is at its lowest point in twenty-five years.

Table D2: Women Chemists, Demographics (Age) 1985–2010

		Year					
	Women Chemists (%)	1985	1990	1995	2000	2005	2010
Age	20-29	28.3	27.1	18.7	14.4	10.6	6.8
	30-39	34.2	37.8	40.0	36.3	29.7	27.8
	40-49	21.4	21.5	24.1	28.5	29.8	28.5
	50-59	10.8	9.9	13.7	16.4	20.9	26.4
	60-69	4.0	3.7	3.4	4.2	8.2	10.4
	70 or older	1.3	0	0.2	0.1	0.7	0.2
	Total	100	100	100	100	100	100
	Number Responding	6,197	7,038	10,625	11,240	8,806	10,616

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table D2 shows age category breakdowns for women chemists. The age distribution has been trending older, a fact that is further demonstrated by table D5, which shows mean ages of women chemists by demographic subgroup.

Table D3: Women Chemists, Demographics (Marriage and Family) 1985–2010

		Year					
	Women Chemists (%)	1985	1990	1995	2000	2005	2010
Marital Status	Single	40.7	37.8	33.4	30.5	28.9	27.5
	Married/Partnered	59.3	62.2	66.6	69.5	71.1	72.5
	Total	100	100	100	100	100	100
	Number Responding	6,169	7,013	10,507	11,240	8,766	10,895
	Of All Married/Partnered						
	To Chemist	30.3	29.4	28.4	28.0	27.1	24.3
	To Non-chemist Scientist	28.0	26.9	28.0	28.2	27.1	25.6
	To Non-scientist	41.7	43.7	43.6	43.8	45.7	50.1

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table D3 shows women chemists broken down by marital status. Women identifying themselves as being married/partners have increased over the years. This could be explained by the fact that mean ages have increased over the same period of time, as we have noted when discussing industrial and academic chemists in earlier parts of this report.

Table D4: Women Chemists, Demographics (Citizenship, Race/Ethnicity) 1985–2010

		Year					
	Women Chemists (%)	1985	1990	1995	2000	2005	2010
Citizenship	U.S. Native	88.2	88.8	82.2	78.8	80.4	76.4
	U.S. Naturalized	8.6	7.4	9.1	11.4	10.4	13.6
	Permanent Resident	2.7	2.9	6.5	6.5	5.9	7.3
	Other Visa Status	0.4	0.9	2.2	3.3	3.4	2.7
	Total	100	100	100	100	100	100
	Number Responding	6,190	7,036	10,580	11,208	8,781	10,939
Ethnicity/Race	Hispanic	1.2	2.1	3.0	3.7	3.5	4.3
	Non-hispanic						
	White	89.9	88.9	82.4	81.0	82.4	77.8
	Black/African American	1.8	1.9	2.2	2.6	2.4	3.0
	American Indian	0.1	0.5	0.2	0.2	0.2	0.2
	Asian	6.4	6.2	11.0	11.7	10.9	12.1
	Other or Multiracial	0.7	0.5	1.2	0.7	0.6	2.6
	Total	100	100	100	100	100	100
	Number Responding	6,158	6,785	10,534	10,369	8,721	10,803

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table D4 shows a decline in U.S. native-born citizens as a percentage of women chemists. Permanent resident and other visa status categories have increased relative to U.S. native-born citizens. These, too, are twenty-five year trends.

Table D4 also shows trends in ethnicity across the ChemCensus years. The most telling trend is in the percentage of women chemists identifying themselves as having Asian descent. As noted earlier in this report, Black/African American chemists are in the minority, with only 3.0 percent of women identifying themselves as being Black/African American in 2010. Hispanics are increasing as a percentage of women members, but these percentages remain low, with only 4.3 percent of women in 2010 identifying themselves as Hispanic. The multiracial category was introduced in 2010, making precise twenty-five-year comparisons across race and ethnicity difficult.

Table D5: Women Chemists, Full-Time Workers Mean Age by Demographic Group 1985–2010

		Year					
	Academic Full-time Worker (Mean Age)	1985	1990	1995	2000	2005	2010
Ethnicity	Hispanic	35.5	35.1	37.7	39.3	42.1	44.1
	Non-hispanic						
	White	38.0	36.5	39.1	40.5	43.1	45.2
	Black/African American	39.3	35.7	36.9	37.8	41.5	42.2
	American Indian	34.4	32.5	36.5	40.1	44.2	44.1
	Asian	39.4	37.6	38.9	40.1	42.1	44.1
	Other	35.8	32.4	36.3	40.5	40.4	46.1
	Multiracial	—	—	—	—	—	44.8
Citizenship	U.S. Native	37.5	36.1	38.7	40.2	42.9	44.9
	U.S. Naturalized	43.9	41.6	43.8	44.6	47.4	48.1
	Permanent Resident	37.0	35.9	36.5	38.3	40.0	41.4
	Other Visa Status	38.3	29.7	32.1	33.1	35.7	36.7
Highest Degree	Associate Degree	—	—	38.2	42.0	45.9	48.0
	Bachelor's Degree	34.0	33.0	35.3	36.7	38.7	41.1
	Master's Degree	39.4	38.3	40.6	42.0	44.6	46.2
	Doctorate	41.6	38.7	41.1	42.1	44.5	46.1
	Other Professional Degree	40.6	44.8	38.9	44.6	44.5	45.1

Note. A long dash within a cell indicates that summary data are unavailable.

Women Chemists: Education

Tables in the education section for women are based upon data from all women chemists.

Table D6: Women Chemists Education (Highest Degree Received) 1985–2010

	Year					
Women Chemists (%)	1985	1990	1995	2000	2005	2010
Associate Degree	—	—	0.6	0.6	0.5	0.4
Bachelor's Degree	37.2	36.0	33.6	30.6	25.9	22.0
Master's Degree	26.4	25.3	24.5	24.3	24.1	23.1
Doctorate	35.5	38.2	40.7	43.8	48.8	53.6
Other	0.9	0.5	0.6	0.8	0.8	0.8
Total	100	100	100	100	100	100
Number Responding	6,197	7,038	10,554	11,240	8,806	10,960

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.

Table D6 provides a summary of highest degrees earned by women chemists responding the the ChemCensus surveys. Here we see an increase in the percentage of members having doctoral degrees from one survey to the next. Among responding members in 1985, only 54.4 percent possessed doctoral degrees. By 2010, that percentage had increased to 63.5 percent.

Table D7: Women Chemists (Years of Experience) 1985–2010

	Year					
Women Chemists (%)	1985	1990	1995	2000	2005	2010
0–1 Years	3.0	1.7	7.4	0.1	1.4	0.9
2–4 Years	11.2	8.8	19.0	6.9	3.9	3.6
5–9 Years	23.5	24.7	22.3	15.0	11.6	9.8
10–14 Years	17.2	21.2	16.0	19.0	16.5	15.8
15–19 Years	12.8	13.7	11.2	18.1	15.0	14.7
20–24 Years	11.8	10.0	9.0	13.5	15.2	13.2
25–29 Years	7.7	8.9	7.8	9.8	12.8	14.9
30–34 Years	4.8	5.1	4.2	7.8	10.2	11.8
35–39 Years	5.0	2.8	2.9	6.0	7.0	8.5
40 Years or More	3.0	3.0	0	3.7	6.5	6.7
Total	100	100	100	100	100	100
Number Responding	6,143	6,423	10,241	11,127	8,762	10,380

Note. Percentages may not total exactly 100% due to rounding of components. A long dash within a cell indicates that summary data are unavailable.
Years of experience refers to years since earning a bachelor's degree.

Table D7 shows years of experience (years since earning the bachelor's degree). Distributional changes for this demographic are consistent with the trend in ages observed throughout this report.

Women Chemists: Employment and Salaries

Salaries are the focus of the last section of our report, now focusing upon women. The great majority of the tables report salaries of full-time employed women chemists in nominal dollars. The final table shows salaries of women chemists converted to real dollars.

Tables for women's employment and salary are based upon data for all women who were working full-time during the week of March 1, 2010.

Table D8: Women Chemists (Median Salary by Gender, Years of Experience, and Highest Degree Earned) 1985–2010

		Year					
	ACS Full-time Worker Median Salary (Nominal Dollars)	1985	1990	1995	2000	2005	2010
Years of Experience	2–4	23,000	28,300	39,300	37,800	42,000	44,660
	5–9	29,000	34,800	47,000	46,500	54,000	58,750
	10–14	32,000	42,000	53,000	54,879	65,000	68,060
	15–19	33,750	43,200	56,000	62,000	71,000	78,000
	20–24	35,000	45,858	55,500	64,000	77,667	80,000
	25–29	34,000	45,000	54,800	68,000	78,542	85,000
	30–34	36,200	45,228	56,650	62,634	79,152	85,000
	35–39	35,100	45,000	56,000	65,500	73,000	85,000
	40 or More	36,500	47,000	—	64,000	78,693	81,400
Highest Degree	Bachelor's Degree	26,000	33,240	39,800	46,825	55,000	60,000
	Master's Degree	30,000	39,000	46,500	54,433	65,000	69,000
	Doctorate	36,650	47,000	56,467	68,000	80,000	85,000
	Other Professional Degree	28,400	40,500	56,900	73,500	70,000	98,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table D9: Women Chemists (Median Salary in Nominal Dollars by Geographic Region and Highest Degree Earned) 1985–2010

	Women Full-time Worker Median Salary (Nominal Dollars)	Year					
		1985	1990	1995	2000	2005	2010
Bachelor's Degree	New England	—	32,000	39,000	48,800	57,420	65,000
	Middle Atlantic	—	34,000	42,800	48,936	59,000	64,250
	South Atlantic	—	32,525	39,000	45,000	54,040	57,000
	East North Central	—	33,000	39,000	45,762	53,000	58,490
	East South Central	—	32,000	35,000	45,000	45,000	54,610
	West North Central	—	31,000	37,000	42,150	50,000	56,000
	West South Central	—	34,000	39,984	49,000	52,000	60,124
	Mountain	—	34,800	37,400	44,110	46,952	60,000
	Pacific	—	35,935	42,335	49,550	60,000	65,750
Master's Degree	New England	—	40,000	47,950	56,200	70,000	80,000
	Middle Atlantic	—	41,450	51,000	56,868	70,000	73,410
	South Atlantic	—	37,960	44,800	54,000	62,900	69,000
	East North Central	—	38,300	46,000	53,000	65,000	65,000
	East South Central	—	36,000	42,665	51,000	49,900	55,000
	West North Central	—	32,000	42,000	49,200	60,000	59,625
	West South Central	—	35,525	42,635	50,000	60,000	56,500
	Mountain	—	35,800	43,000	47,819	58,000	60,500
	Pacific	—	42,000	48,000	58,077	69,000	73,300
Doctorate	New England	—	48,000	59,900	70,000	90,000	94,000
	Middle Atlantic	—	48,500	60,300	72,000	82,596	91,000
	South Atlantic	—	45,300	56,000	68,000	80,000	84,300
	East North Central	—	45,500	55,000	66,308	77,600	78,000
	East South Central	—	46,750	50,000	48,000	62,000	65,000
	West North Central	—	43,000	50,000	60,000	68,000	65,000
	West South Central	—	44,570	53,500	60,000	70,280	69,000
	Mountain	—	44,750	51,000	65,000	78,000	90,000
	Pacific	—	50,000	57,000	73,022	86,100	94,757

Note. A long dash within a cell indicates that summary data are unavailable.

Table D10: Women Chemists Median Salary in Nominal Dollars by Highest Degree Earned and Employer Type) 1985–2010

	Industrial Full-time Worker Median Salary by Employer Type (Nominal Dollars)	Year					
		1985	1990	1995	2000	2005	2010
All Degrees	Industry	31,500	40,500	50,000	60,000	76,000	87,000
	Academic	26,000	34,367	39,000	46,350	54,224	60,000
	Government	20,800	39,696	50.000	60,900	76,918	85,000
	Self-Employed	31,600	35,000	40.000	50,000	50,000	68,150
BS Highest	Industry	26,500	34,000	40.500	47,500	57,000	64,000
	Academic	19,000	24,000	25,000	33,000	40,000	39,500
	Government	22,900	34,000	40.000	48,500	56,390	60,822
	Self-Employed	26,800	32,276	43.200	48,000	40,750	56,000
MS Highest	Industry	32,000	41,000	49.900	58,221	72,500	80,000
	Academic	22,500	30,000	35,900	42,000	50,000	52,000
	Government	0	39,572	47.615	59,250	70,000	77,290
	Self-Employed	31,000	39,584	16.350	30,000	40,000	72,900
PhD Highest	Industry	40,000	51,040	63.000	77,017	94,450	106,000
	Academic	28,500	37,377	41,825	49,000	58,000	65,000
	Government	16,850	46,861	60.000	73,000	92,000	103,500
	Self-Employed	39,500	44,575	50.000	71,000	52,000	90,000

Note. A long dash within a cell indicates that summary data are unavailable.

Table D11: Women Chemists (Median Salary in Nominal Dollars by Highest Degree Earned and Years of Experience) 1985–2010

	Full-time Worker Experience Median Salary (Nominal Dollars)	Year					
		1985	1990	1995	2000	2005	2010
Bachelor's Degree is Highest Degree	2–4 Years	23,000	28,024	38,000	37,090	42,000	44,000
	5–9 Years	26,500	32,450	43,368	42,800	50,025	52,000
	10–14 Years	30,000	37,000	48,857	51,000	58,000	63,000
	15–19 Years	33,000	39,932	50,000	53,940	65,000	70,000
	20–24 Years	33,000	41,500	50,000	56,600	66,000	76,716
	25–29 Years	32,850	41,798	52,000	60,000	70,000	72,000
	30–34 Years	34,000	45,228	50,550	55,000	72,443	78,755
	35–39 Years	36,400	42,300	49,000	60,750	68,700	77,636
	40 or More Years	36,000	45,000	—	60,794	70,500	61,000
Master's Degree is Highest Degree	2–4 Years	26,000	30,450	40,000	42,000	47,000	48,500
	5–9 Years	29,000	35,000	45,400	47,140	56,000	58,900
	10–14 Years	32,000	42,000	50,000	52,000	62,762	68,000
	15–19 Years	31,500	41,300	55,920	58,625	71,000	67,500
	20–24 Years	33,000	43,600	53,000	60,000	72,000	80,000
	25–29 Years	32,100	40,300	49,536	63,100	74,271	79,080
	30–34 Years	29,050	42,372	49,550	61,150	72,924	70,000
	35–39 Years	32,000	43,400	53,056	56,604	70,000	75,282
	40 or More Years	32,250	43,565	—	55,000	67,200	69,500
Doctorate is Highest Degree	2–4 Years	35,000	32,200	48,000	—	45,675	—
	5–9 Years	36,000	43,650	53,324	63,500	68,250	75,800
	10–14 Years	36,000	47,000	58,790	63,000	74,896	72,000
	15–19 Years	37,000	49,436	62,000	68,000	74,000	84,300
	20–24 Years	37,500	50,171	63,441	75,000	85,832	81,500
	25–29 Years	36,000	48,470	60,000	75,000	87,871	94,000
	30–34 Years	40,000	49,094	62,000	68,400	86,116	98,179
	35–39 Years	39,500	48,000	61,375	75,000	77,000	93,000
	40 or More Years	41,500	53,250	—	71,700	89,500	93,000

Note. A long dash within a cell indicates that summary data are unavailable. Years of experience refers to years since earning a bachelor's degree.

Table D12: Women Chemists (Median Salary in Real Dollars by Years of Experience and Highest Degree Earned) 1985–2010

		Year					
	Women Full-time Worker Median Salary (Real Dollars)	1985	1990	1995	2000	2005	2010
Years of Experience	2–4	47,044	47,855	56,492	48,052	47,287	44,660
	5–9	59,317	58,847	67,560	59,111	60,797	58,750
	10–14	65,453	71,022	76,185	69,763	73,182	68,060
	15–19	69,032	73,051	80,498	78,815	79,937	78,000
	20–24	71,589	77,546	79,779	81,357	87,443	80,000
	25–29	69,544	76,095	78,773	86,442	88,428	85,000
	30–34	74,044	76,480	81,432	79,620	89,116	85,000
	35–39	71,794	76,095	80,498	83,264	82,189	85,000
	40 or More	74,657	79,477	—	81,357	88,598	81,400
Highest Degree	Bachelor's Degree	53,181	56,209	57,211	59,524	61,923	60,000
	Master's Degree	61,362	65,949	66,842	69,196	73,182	69,000
	Doctorate	74,964	79,477	81,169	86,442	90,070	85,000
	Other Professional Degree	58,089	68,485	81,791	93,434	78,811	98,000

Note. A long dash within a cell indicates that summary data are unavailable. Real dollars represent nominal dollars adjusted for inflaction using 2010 as the base year. Years of experience refers to years since earning a bachelor's degree.

For comparisons of women's salaries across the twenty-five year period of ChemCensus surveys, we rely upon the real-dollar table. To convert from nominal to real dollars, we selected March 2010 as our base month and year. Bureau of Labor Statistics data for the Consumer Price Index (all urban consumers across all product categories) were utilized in making this conversion.

Salaries for women chemists have increased in real dollars over the twenty-five-year period of ChemCensus surveys, with most of this increase being associated with higher salaries at the high end of years of experience.

As our analyses for all members, industrial chemists, and academic chemists have shown, women's salaries are generally lower than men's salaries.

Appendix:
2010 ChemCensus Survey

ACS Chemistry for Life®

ChemCensus2010

This information is solicited under the authority of the ACS Committee on Economic and Professional Affairs Subcommittee on Surveys. All data will be reported in aggregate and responses will be kept confidential. This survey should take no more than 15 minutes to complete. Please use a No. 2 pencil or blue or black ink pen.

Part I. EDUCATION BACKGROUND

1. What is the highest degree you have received?

Use an X to mark your answer.

1 ☐ Associate degree (e.g., AA, AS)
2 ☐ Bachelor's degree (e.g., BA, BS, AB)
3 ☐ Master's degree (e.g., MS, MA, MBA)
4 ☐ Doctorate (e.g., PhD, DSc, EdD)
5 ☐ Other professional degree (e.g., JD, DDS, MD), please specify

_____

2. In what year was the first of <u>each</u> degree awarded?

	Year
Associate	☐☐☐☐
Bachelor's	☐☐☐☐
Master's	☐☐☐☐
Doctorate	☐☐☐☐
Other professional degree	☐☐☐☐

3. Mark the ONE field in which you earned your <u>highest degree</u>.

Mark one answer.

1 ☐ Chemical engineering
2 ☐ Agricultural/food chemistry
3 ☐ Analytical chemistry
4 ☐ Biochemistry
5 ☐ Biotechnology
6 ☐ Chemical education
7 ☐ Clinical chemistry
8 ☐ Environmental chemistry
9 ☐ General chemistry
10 ☐ Inorganic chemistry
11 ☐ Materials science
12 ☐ Medicinal/pharmaceutical chemistry
13 ☐ Nanochemistry
14 ☐ Organic chemistry
15 ☐ Physical chemistry
16 ☐ Polymer chemistry
17 ☐ Other chemical science, please specify

_____

18 ☐ Business administration
19 ☐ Computer science
20 ☐ Education
21 ☐ Law
22 ☐ Medicine/healthcare
23 ☐ Other non-chemistry, please specify

_____

00001

Part II. EMPLOYMENT SITUATION

4. Were you working for pay or for profit during the week of March 1, 2010?

Working includes being a student on paid work-study, self-employed, or on any type of leave, including vacation.

1 ☐ Yes → **Go to page 3, question 10**

2 ☐ No

5. *(If no)* **Did you seek work during the four weeks preceding March 1, 2010?** *This would be between February 1st and March 1st.*

1 ☐ Yes

2 ☐ No

6. What were your reasons for not working during the week of March 1, 2010?

Mark Yes or No for each item.

	Yes	No
Retired	1 ☐	2 ☐
Chronic illness or permanent disability	1 ☐	2 ☐
Family responsibilities	1 ☐	2 ☐
Suitable job not available	1 ☐	2 ☐
Student	1 ☐	2 ☐
On layoff from a job	1 ☐	2 ☐
Did not want or need to work	1 ☐	2 ☐
Other, please specify	1 ☐	2 ☐

7. Prior to the week of March 1, 2010, when did you last work for pay or profit?

0 ☐ *Mark this box if you never worked for pay or profit, then go to page 8, question 42.*

Month ☐☐ Year ☐☐☐☐

DATE LAST WORKED

8. What was the title of the last job you held prior to the week of March 1, 2010?

Examples: Analytical Chemistry Professor, Formulation Scientist, Research Director, Technician

If academic, please include rank.

JOB TITLE

9. What kind of work were you doing on this last job; that is, what were your duties and responsibilities on your last job? Please be as specific as possible, including any area of specialization.

Examples: Prepare chemical assays, supervise staff, design petroleum additives, teach graduate courses, run quality control

DUTIES AND RESPONSIBILITIES

STOP

GO TO PAGE 8, QUESTION 42

Part III. PRINCIPAL EMPLOYER

10. Who was your principal employer during the week of March 1, 2010?

If you had more than one job, report the one for which you worked the most hours that week.

If your employer had more than one location, report the location that employed you.

If you worked for a contracting or consulting company, or temp agency, report the name of that company, not the client organization.

Employer Name:

Department/Division:

State:

ZIP Code:

11. What was that employer's main business or industry; that is, what did that employer make or do?

Examples: Pharmaceutical manufacturing, University, Government oversight lab

If your employer had more than one type of business, report the type of business primarily performed at the location where you worked.

EMPLOYER'S MAIN BUSINESS

12. How many people work for your principal employer? Your best estimate is fine.

Mark one answer.

1 ☐ 10 or fewer employees
2 ☐ 11 to 24 employees
3 ☐ 25 to 49 employees
4 ☐ 50 to 99 employees
5 ☐ 100 to 499 employees
6 ☐ 500 to 2,499 employees
7 ☐ 2,500 to 9,999 employees
8 ☐ 10,000 to 24,999 employees
9 ☐ 25,000 or more employees
10 ☐ Don't know

13. Was your principal employer an educational institution?

1 ☐ Yes
2 ☐ No → **Go to page 4, question 20**

14. *(If yes)* **Was the educational institution where you worked a ...**

Mark one answer.

College or university (excluding medical or professional schools) where the highest degree offered in chemistry or chemical engineering is:

1 ☐ Associate
2 ☐ Bachelor's
3 ☐ Master's
4 ☐ Doctorate

5 ☐ Medical or professional school
6 ☐ High school
7 ☐ Other academic, please specify

15. What type of institution was your principal academic employer?

1 ☐ Public
2 ☐ Private

16. What is your academic rank?

Mark one answer.

1 ☐ Administrator
2 ☐ Full professor
3 ☐ Associate professor
4 ☐ Assistant progressor
5 ☐ Visitor or adjunct
6 ☐ Non-teaching research appointment
7 ☐ Other non-faculty
8 ☐ My institution does not have ranks
9 ☐ Secondary teacher

17. What is your tenure status?

Mark one answer.

1 ☐ Tenured
2 ☐ Not tenured, in tenure track
3 ☐ Not tenured, not in tenure track
4 ☐ N/A

18. What is your basic contract period?

Mark one answer.

1 ☐ 9 or 10 months
2 ☐ 11 or 12 months
3 ☐ Semester-by-semester
4 ☐ Other, please specify ↘

_____

19. Which of the following do you devote the most time to?

Mark one answer.

1 ☐ Teaching, undergraduate
2 ☐ Teaching, graduate
3 ☐ Research
4 ☐ Administration
5 ☐ Other, please specify ↘

_____

GO TO PAGE 5, QUESTION 21

20. Which ONE of the following best describes your principal employer during the week of March 1, 2010? Were you ...

Mark one answer.

SELF-EMPLOYED or a BUSINESS OWNER

1 ☐ In a non-incorporated business, professional practice, or firm
2 ☐ In an incorporated business, professional practice, or firm

PRIVATE SECTOR

3 ☐ In a for-profit company or organization
4 ☐ In a non-profit company organization (including tax exempt and charitable organizations)

GOVERNMENT

5 ☐ In a local government (e.g., city, county, school district)
6 ☐ In a state government (e.g., state inspection bureau, lab)
7 ☐ In the U.S. military service, active duty or Commissions Corps
8 ☐ In the U.S. government (e.g., civilian employee)

OTHER

9 ☐ Other, please specify ↘

_____

Part IV. PRINCIPAL JOB

21. Is your employment permanent or temporary?

1 ☐ Permanent
2 ☐ Temporary

22. Is your employment full-time or part-time?

1 ☐ Full-time (>35 hours per week)
2 ☐ Part-time (< 35 hours per week)

23. Is your employment a postdoctoral assignment?

1 ☐ Yes
2 ☐ No

24. What was the title of the principal job you held during the week of March 1, 2010?

Examples: Analytical Chemistry Professor, Formulation Scientist, Research Director, Technician

If academic, please include rank.

JOB TITLE

_____

25. What kind of work were you doing on this job; that is, what were your duties and responsibilities on your principal job? Please be as specific as possible.

Examples: Prepare chemical assays, supervise staff, design petroleum additives, teach graduate courses, run quality control

DUTIES AND RESPONSIBILITIES

_____
_____
_____
_____
_____

26. What is the ONE work function that best describes your job?

Mark one answer.

1 ☐ Analytical services, other than forensics
2 ☐ Chemistry information services
3 ☐ Computer programming, analysis, design
4 ☐ Consulting
5 ☐ Forensic analysis
6 ☐ General management or administration (non-R&D)
7 ☐ Health and safety/regulatory affairs
8 ☐ Marketing, sales, purchasing, technical service, economic evaluation
9 ☐ Patents, licensing, trademarks
10 ☐ Production, quality control
11 ☐ R&D: Applied research, development, design
12 ☐ R&D: Basic research
13 ☐ R&D: Management or administration
14 ☐ Teaching or training
15 ☐ Other, please specify

_____

27. What would you consider your ONE work specialty to be?

Mark one answer.

1 ☐ Chemical engineering
2 ☐ Agricultural/food chemistry
3 ☐ Analytical chemistry
4 ☐ Biochemistry
5 ☐ Biotechnology
6 ☐ Chemical education
7 ☐ Clinical chemistry
8 ☐ Environmental chemistry
9 ☐ General chemistry
10 ☐ Inorganic chemistry
11 ☐ Materials science
12 ☐ Medicinal/pharmaceutical chemistry
13 ☐ Nanochemistry
14 ☐ Organic chemistry
15 ☐ Physical chemistry
16 ☐ Polymer chemistry
17 ☐ Other chemical science, please specify

_____

18 ☐ Business administration
19 ☐ Computer science
20 ☐ Education
21 ☐ Law
22 ☐ Medicine/healthcare
23 ☐ Other non-chemistry, please specify

_____

28. During what month and year did you start this job (that is, the principal job that you held during the week of March 1, 2010)?

Month ☐☐ Year ☐☐☐☐

PRINCIPAL JOB START DATE

29. To what extent was your work on your principal job related to the field of your highest degree? Was it ...

Mark one answer.

1 ☐ Closely related
2 ☐ Somewhat related
3 ☐ Not related

30. Supervision entails the evaluating, promoting, hiring, or firing of others. **As of March 1, 2010, how many people did you...**

supervise directly? . . . . . ☐,☐☐☐
(If none, enter "0")

supervise indirectly through subordinates? . . . ☐☐,☐☐☐
(If none, enter "0")

31. What was your base annual salary from your primary employer?

Do NOT include bonuses, overtime, and secondary compensation/supplemental earnings.

If on a 9 or 10 month academic contract do not annualize salary.

If you did not earn a base salary, enter "0."

$ ☐,☐☐☐,☐☐☐.00
SALARY THIS MARCH (3/1/10)

$ ☐,☐☐☐,☐☐☐.00
SALARY LAST MARCH (3/1/09)

The following questions are about your compensation in 2009.

32. What was your total professional income during calendar year 2009?

Include base annual salary, bonuses, overtime, consulting income, and secondary compensation/ supplemental earnings.

$ ☐,☐☐☐,☐☐☐.00
INCOME LAST YEAR (2009)

33. Were you eligible for a bonus during 2009?

Mark one answer.

1 ☐ Yes
2 ☐ No → **Go to question 36**
3 ☐ N/A

34. *(If yes or N/A)* **Did you receive a bonus in 2009?**

1 ☐ Yes
2 ☐ No → **Go to question 36**

35. *(If yes)* **What was the total bonus amount?**

$ ☐,☐☐☐,☐☐☐.00
BONUS RECEIVED IN 2009

36. Did you receive stock or stock options as part of your professional income in 2009?

1 ☐ Yes
2 ☐ No

37. Did you do any consulting in 2009?

1 ☐ Yes
2 ☐ No → **Go to page 8, question 42**

38. Was consulting your principal occupation in 2009?

1 ☐ Yes
2 ☐ No

39. How many hours per month on average did you consult in 2009?

☐☐☐
HOURS PER MONTH (AVERAGE)

40. What was your average hourly rate for consulting in 2009?

$ ☐,☐☐☐.00
HOURLY CONSULTING RATE (AVERAGE)

41. What was your <u>total</u> consulting income during 2009?

$ ☐,☐☐☐,☐☐☐.00
TOTAL CONSULTING INCOME IN 2009

Part V. DEMOGRAPHICS

42. What is your gender?

1 ☐ Male
2 ☐ Female

43. What is your birth date?

Month ☐☐ Year ☐☐☐☐

44. Do you consider yourself to be a person with a disability?

1 ☐ Yes
2 ☐ No

45. What is your citizenship or visa status?

Mark one answer.

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

46. Are you of Hispanic or Latino origin or descent?

1 ☐ Yes
2 ☐ No

47. What is your racial background?

Mark one or more.

1 ☐ White
2 ☐ Black or African American
3 ☐ American Indian or Alaskan Native
4 ☐ Asian or Pacific Islander
5 ☐ Other race, please specify ↘

_____

48. What is your marital status?

1 ☐ Married/partnered → **Go to question 49**
2 ☐ Single

49. *(If married/partnered)* **Is your spouse/partner a:**

Mark one answer.

1 ☐ Chemist
2 ☐ Other scientist
3 ☐ Non-scientist

THANK YOU FOR COMPLETING THIS SURVEY.

Any comments?

_____

_____

_____

_____

Please return this questionnaire using the prepaid envelope provided or mail to

American Chemical Society
C/O Intelliscan, Inc.
PO Box 743
Phoenixville PA 19460-9937

If you have any questions or need assistance, contact us at chemcensus@acs.org.

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