



STARTING SALARIES 1999

CHEMISTS AND CHEMICAL ENGINEERING NEW GRADUATES, CLASS OF 1999

Quick Summary: [New Chemists: The Class of 1999 Shows Another Good Market](#)

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ACS Department of Career Services

New Chemists: The Class of 1999 Shows Another Good Market!

The booming U.S. economy continues to show positive effects for most new chemistry graduates. For the third year in a row, new grads showed improved salaries and strong figures in employment status. The 1999 job market saw the new MS chemists play catch-up.

The employment status of MS chemists who graduated between July 1998 and the end of June 1999 showed considerable improvement in the proportion that found full-time employment. Fewer MS chemists continued on for additional graduate study, while the unemployment rate remained close to last year's figures.

The employment status of the 1999 Ph.D.s was slightly tighter than their counterparts from the Class of 1998 with a small decline in full-time positions and a small increase in those who took postdoc positions. The proportion of new Ph.D.s who take postdocs

Starting Salaries: Inexperienced Chemists by degree and in \$1000s

Class	BS	MS	PHD
1990	23.0	30.0	44.0
1991	23.0	32.0	46.0
1992	24.0	31.5	47.5
1993	24.0	34.0	50.4
1994	24.0	30.8	48.0
1995	25.0	36.0	50.0
1996	25.0	34.1	45.0
1997*	28.0	37.4	54.0
1998*	29.5	38.5	59.7
1999*	30.0	42.0	61.0



*As of the 2nd week of October

Source: New Graduate Surveys

Employment Status of Chemists of the Classes of 1998/1999

As of the 2nd week of October

	BS	MS	PHD
Full Time, Permanent	35.7/35.9	49.3/52.8	44.4/42.7
Full Time, Temporary	9.9/9.8	6.6/6.7	3.5/6.1
Part Time, Permanent	0.6/0.8	0.9/0.2	0.5/0.3
Part Time, Temporary	2.6/2.7	1.3/2.0	1.3/1.2
Post Doc or Graduate	42.9/43.5	34.5/31.3	45.3/45.5
Not Employed			
Seeking	5.7/4.8	5.1/5.2	2.5/2.4
Not Seeking	2.6/2.4	2.3/1.7	2.4/1.8
Overall Unemployment*	5.8/4.9	5.2/5.3	2.6/2.4



* Not seeking dropped from calculation

Source: ACS New Graduate Surveys

is generally considered one of the measures of the Ph.D. market.

New BA/BS chemistry graduates showed marked improvement in their fall unemployment rates and a slight increase in the proportion who opted for further study in the fall of 1999.

The overall starting salaries for new graduates hit new benchmarks; the BA/BS chemists topped \$30,000; the MS chemist topped \$40,000 at \$42,000; and the Ph.D.s topped \$60,000 at \$61,000. Although most new graduates who went to work in industry hit those benchmarks a few years ago, these new figures for the whole class of 1999 portend significant increases for non-industrial chemists, especially at the BA/BS level.

After showing much fluctuation in salaries in the 1990s, the MS chemists have displayed strongly increasing starting salaries for three years in a row. In 1999, over 70 percent of

new MS chemists went to work in industry where their median starting salaries were \$43,000 in non-manufacturing and \$44,000 in manufacturing sectors.

New BA/BS grads showed another increase in industry starting salaries, from \$30,400 to \$32,000. More than 60 percent of the new working bachelor's graduates went to work in industry. More than any other degree, the bachelor's experienced increases in pay across most of their employer categories—government at all levels, manufacturing, non-manufacturing, and secondary education.

The 71 percent of doctoral grads who entered work in industry also showed strong gains, increasing between 1998 and 1999 by \$4000, to \$64,000. Their academic counterparts also increased, but continued to fall behind industrial salaries with a \$1000 increase, to a median of \$36,500.

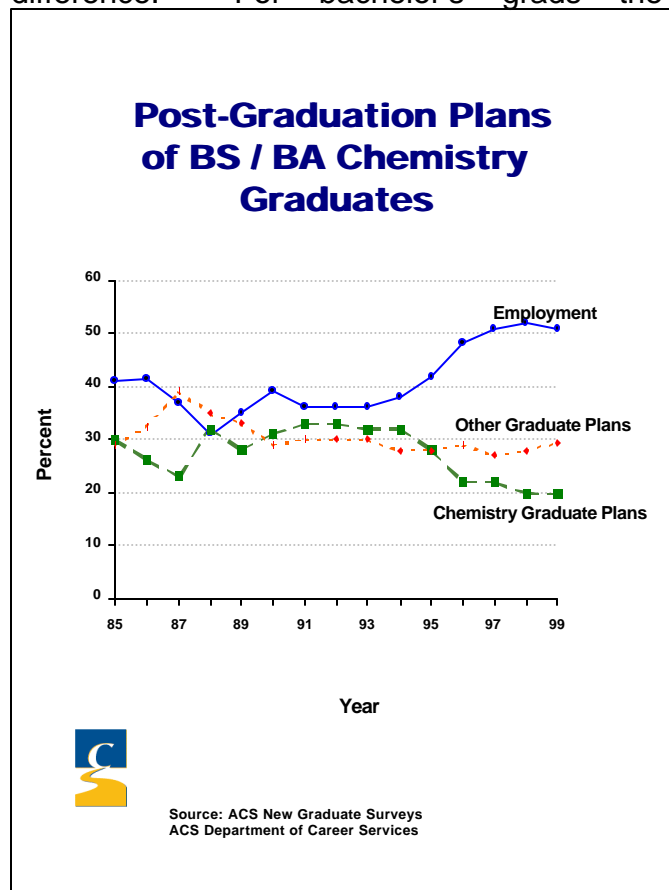
For new grads who go to work in industry, the size of their employer continues to make a difference. For bachelor's grads the

difference is \$12,000 between working for an employer with fewer than 50 employees and working for a very large employer with more than 25,000 employees. At the MS level the grads' starting salary difference is \$9,400 between the very small and large employer. For the new Ph.D.s, the difference is \$9,700 between the very small and very large employer.

BA/BS certification to ACS continued to make a positive impact on the new grads, but not to the extent of years past. The difference in starting pay dropped to \$1,700 after hitting a high of \$3,000 in 1998. The certified grads also had more favorable employment status, but also not as great a difference as in past years. This perhaps reflects the continuing strong market for all BA/BS chemistry new grads.

The bachelor's grads continued to opt out of chemistry graduate programs in greater proportions. For the first time on record, the percent who planned any further study in chemistry or biochemistry fell below 20 percent. The new bachelor's grads who planned further study in other areas maintained about the same proportion, as did those who had no immediate plans.

The Class of 1999 inexperienced chemical engineers continued at top dollars for science and engineering degrees with increases in already high median starting pay: \$45,000 to \$47,000 for BS; \$50,500 to \$52,000 for MS and \$66,600 to \$67,700 for Ph.D.s. The overwhelming majority of all new chemical engineering grads (about 70 percent) went to work full-time with no immediate plans for further study. More than 80 percent of the new chemical engineers who went to work full-time found jobs with large industrial employers.



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**SALARIES of CHEMISTS employed FULL-TIME
by DEGREE and EXPERIENCE
1999 ACS Starting Salary Survey**

		Highest Degree			
			BA/BS Chem	MS Chem	PHD Chem
Work Experience	Less than 12 months	Median	30,000	42,000	61,000
		Mean	31,299	41,568	56,574
		Std Dev	8,632	9,904	13,504
		Count	843	122	170
	12-36 months	Median	32,500	44,100	55,500
		Mean	33,425	41,374	54,669
		Std Dev	9,197	9,892	13,969
		Count	257	33	52
	More than 36 months	Median	39,000	47,000	64,000
		Mean	38,509	48,031	62,989
		Std Dev	10,150	14,380	18,186
		Count	118	83	54
TOTAL	Median		31,000	43,061	60,500
	Mean		32,446	43,795	57,470
	Std Dev		9,161	12,021	14,831
	Count		1218	238	276

**SALARIES of CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and EXPERIENCE
1999 ACS Starting Salary Survey**

		Highest Degree			
			BS Chem eng	MS Chem eng	PHD Chem eng
Work Experience	Less than 12 months	Median	47,000	52,000	67,700
		Mean	44,924	51,180	66,368
		Std Dev	6,672	6,893	9,002
		Count	601	51	85
	12-36 months	Median	48,000	55,000	68,750
		Mean	46,998	54,282	67,406
		Std Dev	5,048	8,400	10,193
		Count	302	31	32
	More than 36 months	Median	47,100	60,000	69,000
		Mean	46,866	62,568	67,177
		Std Dev	8,419	15,621	14,171
		Count	44	26	15
TOTAL	Median		47,148	54,000	68,000
	Mean		45,675	54,812	66,711
	Std Dev		6,368	10,954	9,911
	Count		947	108	132

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
in PRIVATE INDUSTRY by SEX and DEGREE
1999 ACS Starting Salary Survey**

		Highest Degree			
			BA/BS Chem	MS Chem	PHD Chem
Sex	Female	Median	32,000	42,750	64,000
		Mean	32,900	41,992	62,462
		Std Dev	7,972	6,966	8,648
		Count	260	44	47
	Male	Median	32,500	47,000	62,500
		Mean	33,684	46,383	62,134
		Std Dev	8,560	10,237	9,432
		Count	256	43	73
TOTAL	Median	32,150	44,000	64,000	
	Mean	33,289	44,163	62,262	
	Std Dev	8,270	8,962	9,097	
	Count	516	87	120	

**SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
in PRIVATE INDUSTRY by SEX and DEGREE
1999 ACS Starting Salary Survey**

			Highest Degree		
			BS Chem eng	MS Chem eng	PHD Chem eng
Sex	Female	Median	47,900	53,000	70,000
		Mean	45,946	54,080	68,329
		Std Dev	5,574	3,321	5,944
		Count	222	5	9
	Male	Median	47,000	52,000	67,900
		Mean	45,876	50,427	66,277
		Std Dev	5,700	6,816	6,520
		Count	278	37	56
TOTAL	Median	47,350	52,000	68,000	
	Mean	45,907	50,862	66,561	
	Std Dev	5,639	6,580	6,439	
	Count	500	42	65	

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and EMPLOYER
1999 ACS Starting Salary Survey**

		Highest Degree			
			BA/BS Chem	MS Chem	PHD Chem
EMPTYPE	Self Employed	Median	30,000	---	---
		Mean	30,100	---	---
		Std Dev	9,826	---	---
		Count	5	0	0
	Industry	Median	32,150	44,000	64,000
		Mean	33,289	44,382	62,262
		Std Dev	8,270	9,145	9,097
		Count	516	88	120
	College or univ	Median	24,000	28,500	36,500
		Mean	26,343	29,250	38,704
		Std Dev	12,152	1,893	9,641
		Count	37	4	27
	Medical school	Median	24,000	25,023	27,000
		Mean	24,791	25,591	30,390
		Std Dev	3,780	2,331	8,602
		Count	29	6	3
	Ele/sec school	Median	28,000	38,631	40,000
		Mean	28,073	37,048	36,600
		Std Dev	4,630	5,828	7,925
		Count	71	8	5
	Federal govmnt	Median	31,425	34,000	54,000
		Mean	34,148	34,000	54,000
		Std Dev	7,799	9,899	12,728
		Count	11	2	2
	Military	Median	30,000	45,000	53,000
		Mean	29,602	45,000	53,000
Std Dev		5,449	---	---	
Count		31	1	1	
State or local govmnt	Median	30,000	24,500	35,000	
	Mean	28,689	27,100	35,000	
	Std Dev	6,610	9,666	---	
	Count	29	3	1	
Hospital or lab	Median	26,500	44,000	---	
	Mean	27,466	44,000	---	
	Std Dev	8,973	---	---	
	Count	42	1	0	
Other	Median	26,000	40,300	60,000	
	Mean	28,941	40,300	57,364	
	Std Dev	10,483	5,939	9,680	
	Count	69	8	11	
TOTAL	Median	30,000	42,000	61,000	
	Mean	31,298	41,597	56,574	
	Std Dev	8,639	9,940	13,504	
	Count	840	121	170	

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and EMPLOYER - MEN only
1999 ACS Starting Salary Survey**

		Highest Degree			
			BA/BS Chem	MS Chem	PHD Chem
EMPTYTYPE	Self Employed	Median	22,250	---	---
		Mean	22,250	---	---
		Std Dev	10,960	---	---
		Count	2	0	0
	Industry	Median	32,500	47,000	62,500
		Mean	33,684	46,383	62,134
		Std Dev	8,560	10,237	9,432
		Count	256	43	73
	College or univ	Median	24,400	28,500	34,119
		Mean	25,764	28,500	35,424
		Std Dev	8,860	707	8,550
		Count	11	2	17
	Medical school	Median	23,000	---	24,000
		Mean	23,820	---	24,000
		Std Dev	2,984	---	---
		Count	9	0	1
	Ele/sec school	Median	28,700	40,356	34,500
		Mean	28,308	37,826	34,500
		Std Dev	4,469	6,917	13,435
		Count	33	3	2
	Federal govt	Median	31,213	---	63,000
		Mean	32,595	---	63,000
		Std Dev	8,141	---	---
		Count	6	0	1
	Military	Median	30,000	45,000	53,000
		Mean	29,631	45,000	53,000
		Std Dev	5,577	---	---
		Count	28	1	1
	State or local govt	Median	30,000	37,800	---
		Mean	29,364	37,800	---
		Std Dev	7,214	---	---
		Count	11	1	0
	Hospital or lab	Median	23,210	44,000	---
		Mean	26,056	44,000	---
		Std Dev	6,534	---	---
		Count	8	1	0
	Other	Median	28,800	40,300	59,250
		Mean	30,351	40,300	54,750
		Std Dev	9,869	5,939	8,816
		Count	33	8	8
TOTAL	Median	30,000	44,000	61,000	
	Mean	31,883	44,308	56,165	
	Std Dev	8,469	9,937	14,093	
	Count	397	59	103	

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and EMPLOYER - WOMEN only
1999 ACS Starting Salary Survey**

EMPTYTYPE			Highest Degree		
			BA/BS Chem	MS Chem	PHD Chem
	Self Employed	Median	35,000	---	---
		Mean	35,333	---	---
		Std Dev	5,508	---	---
		Count	3	0	0
	Industry	Median	32,000	42,750	64,000
		Mean	32,900	41,992	62,462
		Std Dev	7,972	6,966	8,648
		Count	260	44	47
	College or univ	Median	23,000	30,000	41,500
		Mean	26,588	30,000	44,280
		Std Dev	13,455	2,828	9,149
		Count	26	2	10
	Medical school	Median	24,500	25,023	33,585
		Mean	25,228	25,591	33,585
		Std Dev	4,081	2,331	9,313
		Count	20	6	2
	Ele/sec school	Median	27,750	36,906	40,000
		Mean	27,869	36,581	38,000
		Std Dev	4,815	5,898	5,292
		Count	38	5	3
	Federal govt	Median	37,000	34,000	45,000
		Mean	36,012	34,000	45,000
		Std Dev	7,827	9,899	---
		Count	5	2	1
	Military	Median	30,000	---	---
		Mean	29,333	---	---
		Std Dev	5,033	---	---
		Count	3	0	0
	State or local govt	Median	28,139	21,750	35,000
		Mean	28,276	21,750	35,000
		Std Dev	6,394	3,889	---
		Count	18	2	1
	Hospital or lab	Median	27,500	---	---
		Mean	27,798	---	---
		Std Dev	9,507	---	---
		Count	34	0	0
	Other	Median	25,100	---	70,000
		Mean	27,649	---	64,333
		Std Dev	10,993	---	9,815
		Count	36	0	3
TOTAL	Median	30,000	40,000	62,000	
	Mean	30,773	38,617	57,204	
	Std Dev	8,765	8,826	12,622	
	Count	443	61	67	

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and TYPE OF INDUSTRY
1999 ACS Starting Salary Survey**

Employer			Highest Degree		
			BA/BS Chem	MS Chem	PHD Chem
Nonmanufacturing	Median		24,750	43,080	56,200
	Mean		28,023	45,527	56,200
	Std Dev		10,679	6,704	8,768
	Count		36	6	2
Aerospace	Median		35,000	45,000	---
	Mean		35,000	45,000	---
	Std Dev		10,000	7,071	---
	Count		3	2	0
Agricultural chemicals	Median		28,000	52,500	62,000
	Mean		26,857	52,500	62,000
	Std Dev		3,848	---	0
	Count		7	1	2
Basic chemicals	Median		35,000	33,000	64,000
	Mean		33,311	33,000	60,691
	Std Dev		8,037	---	8,053
	Count		13	1	9
Biotechs	Median		30,000	37,000	62,000
	Mean		30,984	38,948	59,500
	Std Dev		6,066	6,026	10,202
	Count		44	8	15
Electronics	Median		40,000	51,150	59,000
	Mean		41,346	48,021	60,111
	Std Dev		8,504	13,057	13,195
	Count		33	7	9
Petroleum	Median		36,000	58,000	58,000
	Mean		34,712	58,000	59,752
	Std Dev		9,815	---	14,015
	Count		11	1	5
Pharmaceuticals	Median		33,998	45,600	67,350
	Mean		34,525	44,543	65,561
	Std Dev		7,899	8,573	6,813
	Count		186	45	38
Plastics	Median		30,250	55,500	68,400
	Mean		30,944	49,007	63,600
	Std Dev		7,812	12,141	13,424
	Count		18	3	8
Specialty chemicals	Median		35,000	39,000	61,000
	Mean		34,516	38,900	60,134
	Std Dev		5,940	4,749	7,316
	Count		40	5	16
TOTAL	Median		33,000	44,000	64,000
	Mean		33,769	44,308	62,280
	Std Dev		8,461	8,847	9,242
	Count		391	79	104

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
in INDUSTRY by DEGREE and EMPLOYER SIZE
1999 ACS Starting Salary Survey**

			Highest Degree		
			BA/BS Chem	MS Chem	PHD Chem
Employer Size	Less than 50	Median	28,000	40,000	56,500
		Mean	28,805	40,400	55,944
Std Dev		8,283	6,657	9,447	
Count		73	12	16	
50 to 499	Median	29,500	39,000	60,000	
	Mean	30,400	39,570	59,795	
	Std Dev	6,985	9,643	10,540	
	Count	151	21	21	
100 to 499	Median	24,500	---	---	
	Mean	24,500	---	---	
	Std Dev	---	---	---	
	Count	1	0	0	
500 to 2,499	Median	32,000	42,500	58,500	
	Mean	32,034	42,634	57,663	
	Std Dev	6,160	10,661	8,364	
	Count	75	14	12	
2,500 to 9,999	Median	35,000	44,825	64,000	
	Mean	35,242	47,269	63,240	
	Std Dev	7,149	7,206	9,086	
	Count	49	8	15	
10,000 to 24,999	Median	36,000	49,500	64,000	
	Mean	36,509	49,440	64,629	
	Std Dev	8,350	6,012	3,866	
	Count	52	11	17	
25,000 or more	Median	40,000	49,400	67,200	
	Mean	38,978	48,620	66,190	
	Std Dev	7,971	7,908	7,933	
	Count	108	21	39	
TOTAL	Median	32,300	44,000	64,000	
	Mean	33,311	44,318	62,262	
	Std Dev	8,303	9,178	9,097	
	Count	509	87	120	

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and WORK FUNCTION
1999 ACS Starting Salary Survey**

			Highest Degree		
			BA/BS Chem	MS Chem	PHD Chem
1st Work Function	Teaching	Median	28,000	36,906	36,400
		Mean	27,971	35,471	36,959
		Std Dev	5,433	6,121	5,445
		Count	78	11	24
	Management	Median	30,000	46,250	62,000
		Mean	31,659	47,636	57,591
		Std Dev	8,988	24,171	12,310
		Count	38	4	11
	Research	Median	30,000	44,000	64,000
		Mean	31,824	42,915	61,081
		Std Dev	7,673	9,283	11,756
		Count	201	57	85
	Dev & design	Median	34,000	45,500	62,500
		Mean	34,622	45,726	61,904
		Std Dev	7,893	6,080	8,811
		Count	69	16	25
	Production	Median	29,750	36,890	64,600
		Mean	29,574	35,718	58,667
		Std Dev	6,798	8,370	14,044
		Count	212	16	6
	Professional svcs	Median	36,000	42,000	63,000
		Mean	36,507	48,000	58,786
		Std Dev	9,635	19,698	10,984
		Count	68	3	7
Other	Median	30,000	40,000	46,000	
	Mean	30,866	40,376	49,015	
	Std Dev	11,032	7,914	10,310	
	Count	176	14	11	
TOTAL	Median	30,000	42,000	61,000	
	Mean	31,301	41,647	56,584	
	Std Dev	8,637	9,906	13,543	
	Count	842	121	169	

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and GEOGRAPHIC REGION
1999 ACS Starting Salary Survey**

		Highest Degree			
			BA/BS Chem	MS Chem	PHD Chem
REGION	Pacific	Median	30,000	44,000	61,000
		Mean	30,220	45,835	58,470
		Std Dev	8,044	9,651	14,341
		Count	84	12	22
	Mountain	Median	25,000	41,000	38,500
		Mean	27,259	42,333	39,763
		Std Dev	7,481	7,483	12,252
		Count	56	9	8
	West North Central	Median	28,000	37,000	58,500
		Mean	29,354	35,011	55,019
		Std Dev	7,186	10,230	13,942
		Count	76	9	12
	West South Central	Median	29,250	35,464	64,800
		Mean	30,488	34,028	62,675
		Std Dev	8,366	7,652	10,622
		Count	46	7	12
	East North Central	Median	30,000	42,500	62,250
		Mean	31,306	43,195	57,611
		Std Dev	7,275	9,865	13,303
		Count	152	27	28
	East South Central	Median	26,750	36,500	48,888
		Mean	30,103	39,000	48,763
		Std Dev	10,164	15,584	15,068
		Count	30	5	6
	Middle Atlantic	Median	32,500	44,000	64,025
		Mean	33,853	42,321	61,423
		Std Dev	9,511	9,568	11,032
		Count	161	24	32
South Atlantic	Median	30,000	41,000	54,000	
	Mean	30,574	40,113	52,898	
	Std Dev	8,552	9,344	11,573	
	Count	139	16	24	
New England	Median	32,000	42,500	62,000	
	Mean	34,967	43,840	56,073	
	Std Dev	10,055	9,534	16,703	
	Count	55	10	15	
TOTAL	Median	30,000	42,000	62,000	
	Mean	31,268	41,525	56,595	
	Std Dev	8,651	9,918	13,714	
	Count	799	119	159	

**SALARIES of INEXPERIENCED B.S. CHEMISTS employed FULL-TIME
by EMPLOYER and CERTIFICATION
1999 ACS Starting Salary Survey**

		Certified to ACS			
			No	Yes	TOTAL
EMPTYTYPE	Self Employed	Median	27,750	30,000	30,000
		Mean	27,750	31,667	30,100
		Std Dev	18,738	2,887	9,826
		Count	2	3	5
	Industry	Median	31,500	34,000	32,150
		Mean	32,700	33,971	33,289
		Std Dev	8,765	7,617	8,270
		Count	277	239	516
	College or univ	Median	24,000	22,000	24,000
		Mean	27,804	24,200	26,343
		Std Dev	14,380	7,828	12,152
		Count	22	15	37
	Medical school	Median	24,000	23,500	24,000
		Mean	24,671	25,020	24,791
		Std Dev	3,813	3,909	3,780
		Count	19	10	29
	Ele/sec school	Median	28,000	28,350	28,000
		Mean	27,791	28,904	28,073
		Std Dev	4,624	4,679	4,630
		Count	53	18	71
Federal govmt	Median	30,588	37,000	31,425	
	Mean	32,872	35,680	34,148	
	Std Dev	8,788	7,081	7,799	
	Count	6	5	11	
Military	Median	30,000	30,000	30,000	
	Mean	29,295	29,727	29,602	
	Std Dev	6,830	4,959	5,449	
	Count	9	22	31	
State or local govmt	Median	30,000	29,653	30,000	
	Mean	28,248	29,410	28,689	
	Std Dev	7,472	5,149	6,610	
	Count	18	11	29	
Hospital or lab	Median	28,000	22,500	26,500	
	Mean	28,694	24,727	27,466	
	Std Dev	10,161	4,733	8,973	
	Count	29	13	42	
Other	Median	26,000	27,750	26,000	
	Mean	28,545	29,910	28,941	
	Std Dev	10,870	9,664	10,483	
	Count	49	20	69	
TOTAL	Median	30,000	30,750	30,000	
	Mean	30,717	32,087	31,298	
	Std Dev	9,156	7,827	8,639	
	Count	484	356	840	

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and DEGREE SPECIALTY
1998 ACS Starting Salary Survey**

		Highest Degree			
			BA/BS Chem	MS Chem	PHD Chem
FIELD	Analytical chem	Median	---	42,000	59,250
		Mean	---	39,866	56,663
		Std Dev	---	11,657	13,991
		Count	0	21	38
	Biochemistry	Median	29,000	35,500	45,000
		Mean	29,633	34,438	47,705
		Std Dev	7,706	9,861	9,279
		Count	173	8	14
	Chemical ed	Median	29,250	41,178	54,500
		Mean	30,401	39,869	54,500
		Std Dev	6,324	4,074	2,121
		Count	55	4	2
	Environm chem	Median	27,000	35,000	64,000
		Mean	29,138	35,000	64,000
		Std Dev	6,758	---	---
		Count	8	1	1
	General chem	Median	30,000	41,000	45,000
		Mean	31,831	41,596	45,000
		Std Dev	9,010	9,217	---
		Count	596	29	1
	Inorganic chem	Median	---	36,953	60,000
		Mean	---	37,258	54,568
		Std Dev	---	5,202	14,023
		Count	0	8	29
	Material sci	Median	37,100	---	69,000
		Mean	36,175	---	71,000
		Std Dev	10,914	---	5,292
		Count	4	0	3
	Med/Pharm chem	Median	---	58,000	52,000
		Mean	---	58,000	52,000
		Std Dev	---	---	22,627
		Count	0	1	2
	Organic chem	Median	---	45,600	66,000
		Mean	---	43,091	62,201
		Std Dev	---	8,132	12,366
		Count	0	32	45
	Physical chem	Median	29,000	40,900	45,000
		Mean	29,000	41,358	51,158
		Std Dev	---	11,024	13,434
		Count	1	10	24

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and DEGREE SPECIALTY
1998 ACS Starting Salary Survey**

		Highest Degree			
			BA/BS Chem	MS Chem	PHD Chem
FIELD	Polymer chem	Median	31,500	42,000	64,000
		Mean	33,750	46,167	60,000
		Std Dev	6,292	8,098	11,541
		Count	4	3	6
	Other	Median	36,750	51,150	64,000
		Mean	36,750	54,154	58,454
		Std Dev	18,738	13,289	11,534
		Count	2	5	5
TOTAL	Median	30,000	42,000	61,000	
	Mean	31,299	41,568	56,574	
	Std Dev	8,632	9,904	13,504	
	Count	843	122	170	

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and DEGREE SPECIALTY
1999 ACS Starting Salary Survey**

		Highest Degree			
			BA/BS Chem	MS Chem	PHD Chem
FIELD	Analytical chem	Median	---	42,000	59,250
		Mean	---	39,866	56,663
		Std Dev	---	11,657	13,991
		Count	0	21	38
	Biochemistry	Median	29,000	35,500	45,000
		Mean	29,633	34,438	47,705
		Std Dev	7,706	9,861	9,279
		Count	173	8	14
	Chemical ed	Median	29,250	41,178	54,500
		Mean	30,401	39,869	54,500
		Std Dev	6,324	4,074	2,121
		Count	55	4	2
	Environm chem	Median	27,000	35,000	64,000
		Mean	29,138	35,000	64,000
		Std Dev	6,758	---	---
		Count	8	1	1
	General chem	Median	30,000	41,000	45,000
		Mean	31,831	41,596	45,000
		Std Dev	9,010	9,217	---
		Count	596	29	1
	Inorganic chem	Median	---	36,953	60,000
		Mean	---	37,258	54,568
		Std Dev	---	5,202	14,023
		Count	0	8	29
	Material sci	Median	37,100	---	69,000
		Mean	36,175	---	71,000
		Std Dev	10,914	---	5,292
		Count	4	0	3
	Med/Pharm chem	Median	---	58,000	52,000
		Mean	---	58,000	52,000
		Std Dev	---	---	22,627
		Count	0	1	2
	Organic chem	Median	---	45,600	66,000
		Mean	---	43,091	62,201
		Std Dev	---	8,132	12,366
		Count	0	32	45
	Physical chem	Median	29,000	40,900	45,000
		Mean	29,000	41,358	51,158
		Std Dev	---	11,024	13,434
		Count	1	10	24

**SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
by DEGREE and DEGREE SPECIALTY
1999 ACS Starting Salary Survey**

		Highest Degree			
			BA/BS Chem	MS Chem	PHD Chem
FIELD	Polymer chem	Median	31,500	42,000	64,000
		Mean	33,750	46,167	60,000
		Std Dev	6,292	8,098	11,541
		Count	4	3	6
	Other	Median	36,750	51,150	64,000
		Mean	36,750	54,154	58,454
		Std Dev	18,738	13,289	11,534
		Count	2	5	5
TOTAL	Median	30,000	42,000	61,000	
	Mean	31,299	41,568	56,574	
	Std Dev	8,632	9,904	13,504	
	Count	843	122	170	

**SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and EMPLOYER
1999 ACS Starting Salary Survey**

		Highest Degree			
			BS Chem eng	MS Chem eng	PHD Chem eng
EMPTYTYPE	Self Employed	Median	50,000	---	---
		Mean	50,000	---	---
		Std Dev	---	---	---
		Count	1	0	0
	Industry	Median	47,250	52,000	68,000
		Mean	45,910	50,862	66,561
		Std Dev	5,628	6,580	6,439
		Count	502	42	65
	College or univ	Median	45,000	48,000	60,600
		Mean	43,548	48,000	65,097
		Std Dev	6,787	2,828	12,491
		Count	23	2	11
	Ele/sec school	Median	29,500	---	---
		Mean	29,500	---	---
		Std Dev	7,778	---	---
		Count	2	0	0
	Federal govt	Median	43,007	60,000	62,550
		Mean	42,650	60,000	62,100
		Std Dev	5,186	8,485	17,032
		Count	20	2	4
Military	Median	24,500	---	48,000	
	Mean	29,117	---	48,000	
	Std Dev	7,136	---	---	
	Count	12	0	1	
State or local govt	Median	36,931	---	68,650	
	Mean	35,344	---	68,650	
	Std Dev	9,088	---	12,233	
	Count	6	0	2	
Hospital or lab	Median	25,000	40,000	---	
	Mean	25,000	40,000	---	
	Std Dev	7,071	---	---	
	Count	2	1	0	
Other	Median	43,500	57,000	82,500	
	Mean	41,298	55,000	82,500	
	Std Dev	8,844	9,165	24,749	
	Count	30	3	2	
TOTAL	Median	47,000	52,000	67,700	
	Mean	44,918	51,144	66,368	
	Std Dev	6,677	6,958	9,002	
	Count	598	50	85	

**SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and EMPLOYER - MEN only
1999 ACS Starting Salary Survey**

		Highest Degree			
			BS Chem eng	MS Chem eng	PHD Chem eng
EMPTYTYPE	Self Employed	Median	50,000	---	---
		Mean	50,000	---	---
		Std Dev	---	---	---
		Count	1	0	0
	Industry	Median	47,000	52,000	67,900
		Mean	45,876	50,427	66,277
		Std Dev	5,700	6,816	6,520
		Count	278	37	56
	College or univ	Median	46,000	46,000	63,300
		Mean	42,780	46,000	67,795
		Std Dev	7,259	---	14,261
		Count	15	1	7
	Ele/sec school	Median	35,000	---	---
		Mean	35,000	---	---
		Std Dev	---	---	---
		Count	1	0	0
	Federal govt	Median	41,000	60,000	50,000
		Mean	41,668	60,000	57,767
		Std Dev	5,605	8,485	17,957
		Count	13	2	3
Military	Median	28,700	---	---	
	Mean	30,300	---	---	
	Std Dev	7,633	---	---	
	Count	8	0	0	
State or local govt	Median	40,000	---	68,650	
	Mean	35,267	---	68,650	
	Std Dev	8,900	---	12,233	
	Count	3	0	2	
Hospital or lab	Median	30,000	---	---	
	Mean	30,000	---	---	
	Std Dev	---	---	---	
	Count	1	0	0	
Other	Median	45,500	54,000	65,000	
	Mean	42,173	54,000	65,000	
	Std Dev	9,532	12,728	---	
	Count	20	2	1	
TOTAL	Median	46,690	52,000	67,700	
	Mean	44,834	50,948	66,111	
	Std Dev	6,730	7,197	8,222	
	Count	340	42	69	

**SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and EMPLOYER - WOMEN only
1999 ACS Starting Salary Survey**

EMPTYTYPE	Industry		Highest Degree		
			BS Chem eng	MS Chem eng	PHD Chem eng
	Industry	Median	47,900	53,000	70,000
		Mean	45,946	54,080	68,329
		Std Dev	5,574	3,321	5,944
		Count	222	5	9
	College or univ	Median	45,000	50,000	57,750
		Mean	44,988	50,000	60,375
		Std Dev	5,979	---	8,159
		Count	8	1	4
	Ele/sec school	Median	24,000	---	---
		Mean	24,000	---	---
		Std Dev	---	---	---
		Count	1	0	0
	Federal govt	Median	43,200	---	75,100
		Mean	44,473	---	75,100
		Std Dev	4,046	---	---
		Count	7	0	1
Military	Median	24,500	---	48,000	
	Mean	26,750	---	48,000	
	Std Dev	6,292	---	---	
	Count	4	0	1	
State or local govt	Median	33,862	---	---	
	Mean	35,421	---	---	
	Std Dev	11,281	---	---	
	Count	3	0	0	
Hospita l or lab	Median	20,000	40,000	---	
	Mean	20,000	40,000	---	
	Std Dev	---	---	---	
	Count	1	1	0	
Other	Median	39,350	57,000	100,000	
	Mean	39,550	57,000	100,000	
	Std Dev	7,423	---	---	
	Count	10	1	1	
TOTAL	Median	47,000	52,500	68,783	
	Mean	45,016	52,175	67,473	
	Std Dev	6,644	5,837	12,072	
	Count	256	8	16	

**SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and TYPE OF INDUSTRY
1999 ACS Starting Salary Survey**

Employer	Nonmanufacturing		Highest Degree		
			BS Chem eng	MS Chem eng	PHD Chem eng
		Median	44,600	38,000	61,500
		Mean	42,866	38,000	60,750
		Std Dev	7,613	2,828	12,339
		Count	28	2	4
	Aerospace	Median	44,000	---	---
		Mean	45,167	---	---
		Std Dev	3,884	---	---
		Count	3	0	0
	Agricultural chemicals	Median	47,600	---	---
		Mean	46,275	---	---
		Std Dev	4,751	---	---
		Count	8	0	0
	Basic chemicals	Median	49,300	46,500	67,565
		Mean	48,720	46,500	66,855
		Std Dev	2,801	7,778	1,621
		Count	27	2	3
	Biotechs	Median	44,000	45,500	62,000
		Mean	42,227	45,500	65,571
		Std Dev	6,902	7,778	7,743
		Count	16	2	7
	Electronics	Median	45,000	56,500	72,000
		Mean	43,972	53,667	70,200
		Std Dev	5,346	6,401	6,017
		Count	41	9	5
	Petroleum	Median	50,000	54,000	65,500
		Mean	49,681	54,440	63,913
		Std Dev	4,252	2,137	4,870
		Count	39	5	8
	Pharmaceuticals	Median	48,000	58,000	70,200
		Mean	46,994	58,000	70,915
		Std Dev	5,143	---	4,933
		Count	65	1	13
	Plastics	Median	48,300	52,800	68,000
		Mean	46,447	52,520	65,422
		Std Dev	6,412	4,993	5,626
		Count	41	5	9
	Specialty chemicals	Median	48,000	52,000	67,700
		Mean	46,330	51,300	66,544
		Std Dev	4,532	4,685	4,200
		Count	60	5	5

**SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and TYPE OF INDUSTRY
1999 ACS Starting Salary Survey**

		Highest Degree		
		BS Chem eng	MS Chem eng	PHD Chem eng
TOTAL	Median	48,000	52,000	68,000
	Mean	46,269	51,365	66,820
	Std Dev	5,669	6,536	6,541
	Count	328	31	54

**SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
in INDUSTRY by DEGREE and EMPLOYER SIZE
1999 ACS Starting Salary Survey**

		Highest Degree			
		BS Chem eng	MS Chem eng	PHD Chem eng	
Employer Size	Less than 50	Median	40,000	40,000	59,000
		Mean	39,564	39,000	56,400
		Std Dev	6,826	1,732	6,986
		Count	36	5	5
	50 to 499	Median	42,000	44,250	68,000
		Mean	41,923	43,875	65,000
		Std Dev	6,412	2,175	10,100
		Count	82	4	5
	500 to 2,499	Median	45,000	53,900	68,000
		Mean	45,335	53,133	66,204
		Std Dev	5,134	4,642	5,024
		Count	70	6	5
	2,500 to 9,999	Median	47,500	52,000	64,500
		Mean	46,029	51,771	64,370
		Std Dev	4,897	4,950	4,273
		Count	53	7	10
	10,000 to 24,999	Median	49,000	52,750	68,000
		Mean	48,313	51,875	67,500
		Std Dev	4,019	5,977	5,184
		Count	79	4	9
	25,000 or more	Median	48,492	54,000	69,300
		Mean	48,248	54,507	68,944
		Std Dev	3,638	3,540	5,192
		Count	175	15	31
TOTAL	Median	47,400	52,000	68,000	
	Mean	45,930	50,654	66,561	
	Std Dev	5,652	6,521	6,439	
	Count	495	41	65	

**SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and WORK FUNCTION
1999 ACS Starting Salary Survey**

		Highest Degree			
			BS Chem eng	MS Chem eng	PHD Chem eng
1st Work Function	Teaching	Median	25,500	46,000	55,500
		Mean	27,500	46,000	56,020
		Std Dev	5,196	---	4,399
		Count	4	1	5
	Management	Median	47,000	54,000	---
		Mean	45,065	54,000	---
		Std Dev	5,804	---	---
		Count	43	1	0
	Research	Median	48,000	50,900	67,383
		Mean	46,465	50,725	66,806
		Std Dev	5,084	8,292	7,737
		Count	55	8	42
	Dev & design	Median	47,000	54,000	68,000
		Mean	46,472	53,567	65,968
		Std Dev	4,840	5,100	8,125
		Count	150	15	25
	Production	Median	48,000	51,500	71,902
		Mean	45,598	51,492	71,902
		Std Dev	6,280	5,912	7,634
		Count	190	12	2
Professional svcs	Median	45,000	46,500	69,000	
	Mean	43,036	47,000	70,000	
	Std Dev	7,339	9,024	16,350	
	Count	85	8	7	
Other	Median	44,614	50,000	72,100	
	Mean	41,937	51,167	68,075	
	Std Dev	8,757	7,910	10,267	
	Count	74	6	4	
TOTAL	Median		47,000	52,000	67,700
	Mean		44,924	51,180	66,368
	Std Dev		6,672	6,893	9,002
	Count		601	51	85

**SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
by DEGREE and GEOGRAPHIC REGION
1999 ACS Starting Salary Survey**

REGION			Highest Degree		
			BS Chem eng	MS Chem eng	PHD Chem eng
Pacific	Median		46,000	56,750	68,500
	Mean		44,031	56,250	68,440
	Std Dev		6,839	8,158	15,252
	Count		44	6	10
Mountain	Median		42,000	49,000	68,150
	Mean		40,763	53,333	68,150
	Std Dev		6,950	11,150	12,940
	Count		25	3	2
West North Central	Median		46,250	50,000	64,000
	Mean		44,651	49,000	64,250
	Std Dev		5,949	2,646	6,162
	Count		42	3	6
West South Central	Median		49,000	54,000	67,000
	Mean		47,030	52,175	63,902
	Std Dev		6,552	7,278	8,480
	Count		100	12	10
East North Central	Median		47,000	47,250	67,683
	Mean		45,418	47,383	66,317
	Std Dev		6,665	7,097	6,879
	Count		120	6	16
East South Central	Median		48,000	---	63,300
	Mean		47,559	---	63,300
	Std Dev		2,952	---	---
	Count		17	0	1
Middle Atlantic	Median		47,000	54,000	68,500
	Mean		45,106	51,500	66,690
	Std Dev		6,822	6,665	5,176
	Count		112	7	20
South Atlantic	Median		45,000	51,900	60,000
	Mean		43,345	50,975	63,241
	Std Dev		7,250	4,829	13,125
	Count		97	8	9
New England	Median		45,000	44,500	70,000
	Mean		45,368	44,750	68,814
	Std Dev		3,418	4,113	9,355
	Count		25	4	7
TOTAL	Median		47,000	52,000	67,700
	Mean		44,990	51,065	66,102
	Std Dev		6,702	7,007	9,009
	Count		582	49	81

**STIPENDS/FELLOWSHIPS/SUPPORT of GRAD STUDENTS/POSTDOCS
CHEMISTS and CHEMICAL ENGINEERS by DEGREE and EMPLOYER SECTOR
1999 ACS Starting Salary Survey**

		Highest Degree						
			BS/BA Chem	MS Chem	PHD Chem	BS Chem eng	MS Chem eng	PHD Chem eng
EMP TYPE	Self Employed	Median	14,400	---	---	---	---	---
		Mean	14,400	---	---	---	---	---
		Std Dev	---	---	---	---	---	---
		Count	1	0	0	0	0	0
	Industry	Median	26,000	55,000	40,000	47,520	65,004	44,000
		Mean	27,542	55,000	40,672	43,717	65,004	47,167
		Std Dev	9,618	---	10,341	12,383	18,379	13,531
		Count	19	1	25	7	2	3
	College or univ	Median	16,500	16,000	26,272	18,000	16,500	30,000
		Mean	16,946	17,165	27,675	18,326	16,461	30,364
		Std Dev	3,963	5,706	5,068	5,239	2,913	3,680
		Count	557	81	162	104	31	25
	Medical school	Median	16,500	16,500	26,750	16,000	17,000	31,000
		Mean	17,528	17,069	27,542	15,643	17,000	31,333
		Std Dev	4,274	4,730	3,845	1,819	---	3,512
		Count	141	13	50	7	1	3
	Ele/sec school	Median	22,500	---	---	12,000	---	---
		Mean	22,500	---	---	12,000	---	---
		Std Dev	---	---	---	---	---	---
		Count	1	0	0	1	0	0
	Federal govmt	Median	23,750	---	40,000	---	---	41,000
		Mean	26,575	---	40,374	---	---	43,943
		Std Dev	10,033	---	6,470	---	---	12,145
		Count	4	0	32	0	0	7
Military	Median	29,373	---	47,000	---	---	---	
	Mean	25,204	---	44,000	---	---	---	
	Std Dev	9,900	---	6,000	---	---	---	
	Count	8	0	4	0	0	0	
State or local govmt	Median	23,500	---	42,600	---	---	57,000	
	Mean	23,500	---	44,200	---	---	57,000	
	Std Dev	16,263	---	4,810	---	---	---	
	Count	2	0	6	0	0	1	
Hospital or lab	Median	20,000	---	28,300	---	---	30,000	
	Mean	18,667	---	29,900	---	---	30,000	
	Std Dev	2,309	---	3,412	---	---	---	
	Count	3	0	4	0	0	1	
Other	Median	18,500	---	28,000	---	21,000	26,450	
	Mean	20,864	---	29,377	---	21,000	26,450	
	Std Dev	7,778	---	4,399	---	---	71	
	Count	11	0	13	0	1	2	
TOTAL	Median	16,800	16,000	28,000	18,000	17,000	30,600	
	Mean	17,552	17,551	30,783	19,609	19,380	34,336	
	Std Dev	4,905	6,756	7,919	8,323	12,160	9,651	
	Count	747	95	296	119	35	42	