

CONSOLIDATED ANNUAL REPORT on State and Territorial Public Health Laboratories



August 1989

Association of State and Territorial
Public Health Laboratory Directors



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on

***State and Territorial
Public Health Laboratories***

Fiscal Year 1988

August 1989

**Association of State and Territorial
Public Health Laboratory Directors
6728 Old McLean Village Drive
McLean, Virginia 22101**

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FOREWORD

The purpose of the Consolidated Annual Report (CAR) is to provide data to the members of the Association of State and Territorial Public Health Laboratory Directors (ASTPHLD) for planning and laboratory management purposes and to other health organizations and government agencies interested in public health laboratories.

The CAR is the only resource containing quantitative information about the various procedures conducted by Association members. The Management and Information Systems Committee of the Association, after considerable deliberation, intends to enhance the CAR, making it more meaningful, timely, and useful not only for Association members but also for users in other health organizations and government agencies. The Committee will ensure that the CAR remains a valued resource document.

Special thanks are due the state and territorial public health laboratory directors and their staff for their continued efforts in providing data for this report. We are also indebted to our Project Officer, Carl H. Blank, Dr.P.H., Centers for Disease Control, for his support and helpful comments. The assistance of these individuals has enabled us to present this comprehensive picture of our public health laboratories.

Suggestions or comments on this report are invited. Please address communications to the Association of State and Territorial Public Health Laboratory Directors, 6728 Old McLean Village Drive, McLean, Virginia 22101.

Henry B. Bradford, Jr., Ph.D.
Chairman
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INTRODUCTION

This, the twenty-fourth edition of the Consolidated Annual Report (CAR), provides quantitative information about laboratory personnel and services identified in 15 workload areas. In addition to tabular displays, this year's CAR also includes graphic displays. The information for the tables and all but one of the graphics was provided by the Association of State and Territorial Public Health Laboratory Directors (ASTPHLD), consisting of the public health laboratories in each of the 50 states, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. Information for the graphic on expenditures was collected by the Public Health Foundation in its annual survey of state health agencies.

The primary intent of the CAR is to aid Association members in planning, evaluating, budgeting, and effecting legislative activity at the state level. Principal users of this reporting system are State and Territorial Laboratory Directors, State and Territorial Health Officials, and the Centers for Disease Control.

Fifty-three of the 54 member laboratories provided data for this edition. The laboratory in New York did not report to the CAR for fiscal year 1988. National totals found in this edition, therefore, represent only 53 state and territorial public health laboratories.

The CAR deals with the personnel and workload activities of ASTPHLD. It omits those public health laboratory services provided by other state/territorial/local agencies. Therefore, this report understates the additional resources expended on public health laboratory services in nearly every state/territory having local health departments. If some type of activity is not reported in this CAR for a given Association member, it may indicate that a state or territorial agency other than the public health laboratory performs that service.

The basic unit of study in the Workload Reporting Section of the CAR is the laboratory specimen/sample. This is defined by ASTPHLD as "any material received in the laboratory for testing in a workload category or subcategory or a material which is divided into allquots for testing in multiple categories or subcategories and is counted as one specimen for each category or subcategory." Specimens collected from the same site on the same patient (or same environmental sample) at the same time, are counted as one specimen in each category or subcategory in which it is tested.

The types of procedures routinely used (those tests performed as a standard operating procedure on a specimen or sample) in Association laboratories are identified by category and subcategory in the 15 workload areas. The ASTPHLD provides workload data in this report only for those procedures routinely followed in their laboratories and excludes those procedures they are capable of performing but do not do on a routine basis.

To assure complete coverage of laboratory activities, the questionnaire for the FY 1988 CAR was composed of three sections: personnel, workload reporting, and organizational structure. The Personnel Section requested the type and number of budgeted positions in five categories and defined these categories by turnover, vacancies, and workload area. All budgeted positions are defined in terms of full-time equivalent (FTE) or man-year equivalent because the standard work week differs among reporting laboratories in terms of number of hours worked. The Workload Reporting Section requested specific data concerning routine laboratory procedures and the number of specimens/samples tested under each procedure. Fiscal data were not collected for FY 1988.

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SUMMARY

TABLE 1. NUMBER OF SPECIMENS, BY REPORTING CATEGORY

Lab & Region	Total Number of Specimens	Diagnostic Bacteriology		Mycology		Parasitology		Virology	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
No. of States Reporting	53	53		47		52		52	
TOTAL	27,434,664	4,666,790	17.01	55,907	0.20	232,524	0.85	1,481,828	5.40
AVERAGE	517,635	88,053		1,190		4,472		28,497	
NEW ENGLAND	2,272,362	221,741	9.76	3,306	0.15	12,805	0.56	81,541	3.59
Connecticut	433,002	43,848	10.08	1,042	0.24	2,391	0.55	20,871	4.77
Massachusetts	1,321,898	67,578	5.11	557	0.04	681	0.05	18,682	1.26
Maine	111,319	9,895	8.89	926	0.83	365	0.33	19,091	17.15
New Hampshire	53,314	17,727	33.25	294	0.55	24	0.05	12,499	23.44
Rhode Island	289,349	73,825	25.51	268	0.09	5,024	1.74	12,391	4.28
Vermont	61,365	9,070	14.78	219	0.36	4,340	7.07	207	0.34
MIDDLE ATLANTIC	858,622	163,654	19.06	663	0.08	870	0.10	81,012	9.44
New Jersey	659,144	155,276	23.56	683	0.10	804	0.12	77,318	11.73
New York*									
Pennsylvania	199,478	8,378	4.20	0	0.00	66	0.03	3,694	1.85
EAST NORTH CENTRAL	4,008,980	192,557	4.80	9,844	0.25	27,537	0.69	222,447	5.55
Illinois	1,368,821	68,036	4.97	641	0.05	4,065	0.30	18,756	1.37
Indiana	161,456	7,475	4.63	623	0.39	3,256	2.02	25,188	15.60
Michigan	1,257,594	44,767	3.56	1,545	0.12	10,392	0.83	51,060	4.06
Ohio	411,146	22,802	5.55	861	0.21	592	0.14	22,727	5.53
Wisconsin	809,963	49,477	6.11	6,174	0.76	9,232	1.14	104,716	12.93
WEST NORTH CENTRAL	1,922,008	314,021	16.34	5,774	0.30	24,238	1.26	124,291	6.47
Iowa	485,848	87,053	17.92	1,498	0.31	5,404	1.11	37,784	7.78
Kansas	309,306	38,951	11.95	791	0.26	6,676	2.16	24,422	7.90
Minnesota	234,815	85,362	36.35	2,857	1.22	3,893	1.66	11,444	4.87
Missouri	586,730	68,162	11.62	330	0.06	4,827	0.82	7,834	1.34
Nebraska	74,909	8,444	11.27	0	0.00	217	0.29	5,241	7.00
North Dakota	118,704	18,095	13.56	239	0.20	1,112	0.94	12,720	10.72
South Dakota	111,696	11,954	10.70	59	0.05	2,109	1.89	24,846	22.24
SOUTH ATLANTIC	8,974,230	1,644,347	18.32	14,941	0.17	107,181	1.19	470,456	5.24
Delaware	145,247	46,960	32.33	4,126	2.84	833	0.57	5,837	4.02
District of Columbia	369,402	84,646	22.91	0	0.00	0	0.00	14,399	3.90
Florida	2,439,046	643,185	26.37	2,067	0.09	58,544	2.40	154,666	6.34
Georgia	853,902	237,248	27.78	700	0.08	18,279	2.14	39,395	4.61
Maryland	2,848,599	320,415	11.25	2,708	0.10	11,068	0.39	93,777	3.29
North Carolina	933,255	21,884	2.34	1,347	0.14	5,603	0.60	52,399	5.61
South Carolina	563,801	93,937	16.66	1,348	0.24	4,049	0.72	58,206	9.97
Virginia	515,674	128,300	24.88	2,142	0.42	6,583	1.28	50,370	9.77
West Virginia	305,304	67,772	22.20	503	0.16	2,224	0.73	3,407	1.12
EAST SOUTH CENTRAL	2,560,417	859,645	33.57	7,227	0.28	25,060	0.98	84,657	3.31
Alabama	973,007	348,595	35.62	4,287	0.44	9,794	1.01	56,646	5.82
Kentucky	303,836	14,033	4.62	0	0.00	3,164	1.04	6,884	2.27
Mississippi	679,625	214,225	31.52	1,158	0.17	8,663	1.27	10,038	1.48
Tennessee	603,949	284,792	47.15	1,782	0.30	3,439	0.57	11,089	1.84
WEST SOUTH CENTRAL	2,990,518	849,588	28.41	10,891	0.36	11,602	0.39	83,748	2.80
Arkansas	373,494	87,628	23.46	2,297	0.62	1,821	0.49	2,145	0.57
Louisiana	670,486	146,888	21.91	1,335	0.20	6,810	0.99	12,834	1.91
Oklahoma	298,110	71,669	24.04	776	0.26	1,523	0.51	41,737	14.00
Texas	1,648,428	543,403	32.96	6,483	0.39	1,648	0.10	27,032	1.64
MOUNTAIN	2,076,769	267,739	12.89	2,419	0.12	9,620	0.46	203,389	9.79
Arizona	109,067	25,795	23.65	441	0.40	90	0.08	21,989	20.16
Colorado	1,139,536	18,904	1.66	149	0.01	2,125	0.19	31,806	2.77
Idaho	146,357	33,203	22.69	253	0.17	960	0.66	42,088	28.76
Montana	83,331	7,474	8.97	225	0.27	1,374	1.65	32,517	39.02
Nevada	123,194	46,800	37.99	42	0.03	2,546	2.07	30,590	24.83
New Mexico	242,209	55,523	22.92	1,000	0.41	2,073	0.86	25,226	10.41
Utah	139,991	21,310	15.22	160	0.11	299	0.21	10,077	7.20
Wyoming	93,084	58,730	63.09	149	0.16	153	0.16	9,296	9.99
PACIFIC	1,028,731	113,549	11.04	672	0.07	10,273	1.00	125,349	12.18
Alaska	111,510	58,591	52.54	224	0.20	3,049	2.73	8,456	7.58
California	110,882	6,758	6.11	45	0.04	838	0.76	25,551	23.09
Hawaii	58,925	7,474	12.68	282	0.48	364	0.62	0	0.00
Oregon	270,381	5,919	2.19	0	0.00	1,953	0.72	57,626	21.31
Washington	477,233	34,807	7.29	121	0.03	4,069	0.85	33,716	7.06
TERRITORIES	742,027	39,949	5.38	170	0.02	3,338	0.45	4,938	0.67
Guam	22,219	9,160	41.23	152	0.68	514	2.31	8	0.04
Puerto Rico	158,848	4,118	2.59	0	0.00	1,224	0.77	4,870	3.07
Virgin Islands	560,960	26,671	4.75	18	0.00	1,600	0.29	60	0.01

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 1. NUMBER OF SPECIMENS, BY REPORTING CATEGORY (continued)

Lab & Region	Total Number of Specimens	Immunology		Hematology		Clinical Chemistry		Pathology	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
(1)	(2)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
No. of States Reporting	53	53		35		45		10	
TOTAL	27,434,664	4,195,578	15.29	1,338,575	4.88	10,257,688	37.39	504,599	1.84
AVERAGE	517,635	79,164		39,245		227,949		50,460	
NEW ENGLAND	2,272,362	184,893	8.14	10,307	0.45	1,136,754	50.03	0	0.00
Connecticut	433,002	42,448	9.80	6,831	1.58	157,627	36.40	0	0.00
Massachusetts	1,321,898	67,312	5.09	0	0.00	936,823	70.87	0	0.00
Maine	111,319	15,739	14.14	0	0.00	16,803	15.09	0	0.00
New Hampshire	53,314	6,005	11.28	0	0.00	0	0.00	0	0.00
Rhode Island	289,349	42,384	14.65	3,476	1.20	25,501	8.81	0	0.00
Vermont	61,365	8,890	14.49	0	0.00	0	0.00	0	0.00
MIDDLE ATLANTIC	858,622	168,769	19.66	280	0.03	300,110	34.95	0	0.00
New Jersey	659,144	166,751	25.30	0	0.00	120,875	18.34	0	0.00
New York*									
Pennsylvania	199,478	2,018	1.01	280	0.14	179,235	89.85	0	0.00
EAST NORTH CENTRAL	4,008,980	332,485	8.29	478	0.01	2,303,922	57.47	98,414	2.45
Illinois	1,368,821	67,306	4.92	0	0.00	1,129,245	82.50	0	0.00
Indiana	161,456	24,599	15.24	0	0.00	0	0.00	0	0.00
Michigan	1,257,594	59,259	4.71	0	0.00	899,815	71.55	0	0.00
Ohio	411,146	21,845	5.31	478	0.12	188,723	45.90	0	0.00
Wisconsin	809,963	159,476	19.69	0	0.00	86,139	10.63	98,414	12.15
WEST NORTH CENTRAL	1,922,008	261,301	13.60	56,012	2.91	536,619	27.92	5	0.00
Iowa	485,848	69,606	14.33	30,876	6.36	0	0.00	0	0.00
Kansas	309,306	32,659	10.56	0	0.00	143,818	46.50	0	0.00
Minnesota	234,815	35,545	15.14	0	0.00	70,356	29.96	5	0.00
Missouri	586,730	75,920	12.94	17,689	3.01	288,396	49.15	0	0.00
Nebraska	74,909	11,964	15.97	0	0.00	2,818	3.76	0	0.00
North Dakota	118,704	22,519	18.97	1,413	1.19	18,293	15.41	0	0.00
South Dakota	111,696	13,088	11.72	6,034	5.40	12,938	11.58	0	0.00
SOUTH ATLANTIC	8,974,230	1,806,802	20.13	705,591	7.88	2,732,625	30.45	300,208	3.35
Delaware	145,247	20,782	14.31	30,116	20.73	7,698	5.30	4,558	3.14
District of Columbia	369,402	78,258	21.19	50,378	13.64	42,910	11.62	14,611	3.96
Florida	2,439,046	700,696	28.73	96,595	3.96	477,727	19.59	0	0.00
Georgia	853,902	313,230	36.68	79,452	9.30	165,425	19.37	0	0.00
Maryland	2,848,599	306,232	10.75	237,576	8.34	1,372,500	48.18	51,490	1.81
North Carolina	933,255	174,880	18.74	84,643	9.07	324,857	34.81	164,496	17.83
South Carolina	563,801	73,260	12.99	95,670	16.97	142,079	25.20	0	0.00
Virginia	515,674	110,428	21.41	30,331	5.88	116,206	22.53	0	0.00
West Virginia	305,304	29,036	9.51	830	0.27	83,223	27.26	65,053	21.31
EAST SOUTH CENTRAL	2,560,417	619,565	24.20	212,292	8.29	490,987	19.18	0	0.00
Alabama	973,007	248,433	25.53	104,558	10.75	115,284	11.85	0	0.00
Kentucky	303,836	41,309	13.60	7,132	2.35	200,094	65.86	0	0.00
Mississippi	679,625	189,684	27.91	96,141	14.15	79,027	11.63	0	0.00
Tennessee	603,949	140,139	23.20	4,461	0.74	96,582	15.99	0	0.00
WEST SOUTH CENTRAL	2,990,518	390,284	13.05	119,478	4.00	957,525	32.02	0	0.00
Arkansas	373,494	83,850	22.45	19,892	5.33	88,471	23.69	0	0.00
Louisiana	670,486	75,848	11.31	31,346	4.68	193,534	28.86	0	0.00
Oklahoma	298,110	77,963	26.15	7,552	2.53	96,890	32.50	0	0.00
Texas	1,648,428	152,623	9.26	60,688	3.68	578,630	35.10	0	0.00
MOUNTAIN	2,076,769	164,161	7.90	171,365	8.25	949,267	45.71	24,408	1.18
Arizona	109,067	40,877	37.48	0	0.00	0	0.00	0	0.00
Colorado	1,139,536	26,546	2.33	163,925	14.39	798,489	70.07	0	0.00
Idaho	146,357	3,522	2.41	6,696	4.58	8,962	6.12	617	0.42
Montana	83,331	5,847	7.02	0	0.00	15,669	18.80	0	0.00
Nevada	123,194	19,050	15.46	23	0.02	940	0.76	0	0.00
New Mexico	242,209	46,595	19.24	166	0.07	52,613	21.72	23,791	9.82
Utah	139,991	13,757	9.83	0	0.00	72,594	51.86	0	0.00
Wyoming	93,084	7,967	8.56	555	0.60	0	0.00	0	0.00
PACIFIC	1,028,731	166,347	16.17	3,915	0.38	501,407	48.74	0	0.00
Alaska	111,510	38,419	34.45	0	0.00	0	0.00	0	0.00
California	110,682	47,438	42.86	22	0.02	1,058	0.96	0	0.00
Hawaii	58,925	1,120	1.90	0	0.00	0	0.00	0	0.00
Oregon	270,381	49,077	18.15	0	0.00	147,436	54.53	0	0.00
Washington	477,233	30,293	6.35	3,893	0.82	352,913	73.95	0	0.00
TERRITORIES	742,027	101,063	13.62	58,857	7.93	348,472	46.96	81,564	10.99
Guam	22,219	4,294	19.33	4,136	18.61	3,628	16.33	0	0.00
Puerto Rico	158,848	83,876	52.80	7,648	4.81	14,637	9.21	0	0.00
Virgin Islands	560,960	12,893	2.30	47,073	8.39	330,207	58.86	81,564	14.54

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

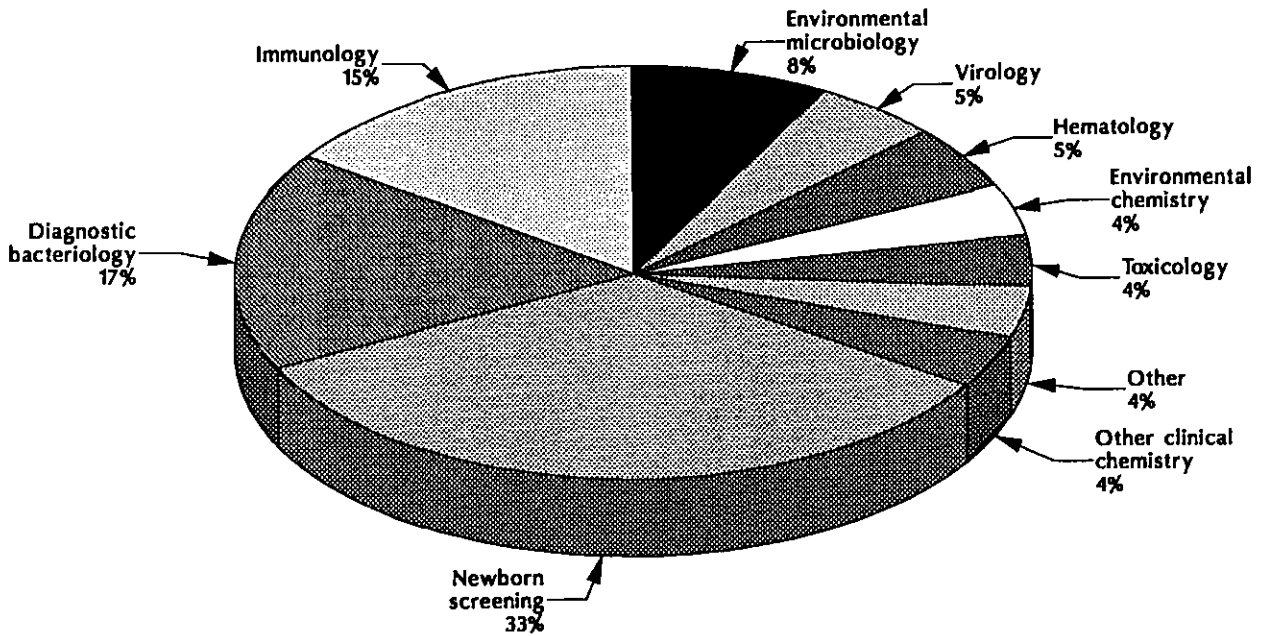
TABLE 1. NUMBER OF SPECIMENS, BY REPORTING CATEGORY (continued)

Lab & Region	Total Number of Specimens	Environmental Microbiology		Environmental Chemistry		Occupational Safety and Health		Toxicology	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
(1)	(2)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
No. of States Reporting	53	52		44		29		40	
TOTAL	27,434,664	2,202,178	8.03	1,212,949	4.42	225,739	0.82	1,060,217	3.86
AVERAGE	517,635	42,350		27,567		7,784		26,505	
NEW ENGLAND	2,272,362	81,168	3.57	115,114	5.07	7,727	0.34	417,006	18.35
Connecticut	433,002	15,618	3.61	32,686	7.55	6,176	1.43	103,866	23.99
Massachusetts	1,321,898	4,541	0.34	2,982	0.23	10	0.00	224,752	17.00
Maine	111,319	17,313	15.55	17,446	15.67	596	0.54	13,145	11.81
New Hampshire	53,314	2,127	3.99	10	0.02	687	1.29	13,941	26.15
Rhode Island	289,349	13,462	4.65	56,461	19.51	165	0.06	56,392	19.49
Vermont	61,365	28,107	45.80	5,529	9.01	93	0.15	4,910	8.00
MIDDLE ATLANTIC	858,622	5,418	0.63	10,942	1.27	4,611	0.54	122,293	14.24
New Jersey	659,144	5,302	0.80	10,942	1.66	4,611	0.70	116,602	17.69
New York*									
Pennsylvania	199,478	116	0.06	0	0.00	0	0.00	5,691	2.85
EAST NORTH CENTRAL	4,008,980	378,029	9.43	196,104	4.89	165,869	4.14	81,294	2.03
Illinois	1,368,821	40,319	2.95	6,313	0.46	16,802	1.23	17,338	1.27
Indiana	161,456	76,397	47.32	22,562	13.97	0	0.00	1,356	0.84
Michigan	1,257,594	118,093	9.23	72,194	5.74	1,650	0.13	819	0.07
Ohio	411,146	70,083	17.05	65,163	15.85	476	0.12	17,396	4.23
Wisconsin	809,963	75,137	9.28	29,872	3.69	146,941	18.14	44,385	5.48
WEST NORTH CENTRAL	1,922,008	281,948	14.67	288,848	15.03	7,707	0.40	21,244	1.11
Iowa	485,848	44,709	9.20	203,467	41.88	5,451	1.12	0	0.00
Kansas	309,306	48,982	15.84	14,368	4.65	639	0.21	0	0.00
Minnesota	234,815	12,500	5.32	11,453	4.88	1,400	0.60	0	0.00
Missouri	586,730	109,294	18.63	14,161	2.41	85	0.01	32	0.01
Nebraska	74,909	25,150	33.57	19,614	26.18	72	0.10	1,389	1.85
North Dakota	118,704	21,968	18.51	14,578	12.28	60	0.05	9,707	8.18
South Dakota	111,696	19,345	17.32	11,207	10.03	0	0.00	10,116	9.06
SOUTH ATLANTIC	8,974,230	579,972	6.46	340,691	3.80	26,255	0.29	245,161	2.73
Delaware	145,247	13,178	9.07	6,175	4.25	0	0.00	4,984	3.43
District of Columbia	369,402	172	0.05	82	0.02	0	0.00	83,946	22.72
Florida	2,439,046	261,082	10.70	23,786	0.98	1,487	0.06	19,211	0.79
Georgia	853,902	173	0.02	0	0.00	0	0.00	0	0.00
Maryland	2,848,599	124,728	4.38	272,413	9.56	14,859	0.52	40,836	1.43
North Carolina	933,255	51,598	5.53	31,293	3.35	196	0.02	20,059	2.15
South Carolina	563,801	11,367	2.02	71	0.01	9,689	1.72	78,125	13.50
Virginia	515,674	71,314	13.83	0	0.00	0	0.00	0	0.00
West Virginia	305,304	46,360	15.18	6,871	2.25	25	0.01	0	0.00
EAST SOUTH CENTRAL	2,560,417	226,467	8.84	22,461	0.88	2,363	0.09	9,693	0.38
Alabama	973,007	86,305	8.87	1,099	0.11	0	0.00	6	0.00
Kentucky	303,836	9,744	3.21	9,710	3.20	2,079	0.68	9,687	3.19
Mississippi	679,625	78,346	11.23	4,343	0.64	0	0.00	0	0.00
Tennessee	603,949	54,072	8.95	7,309	1.21	284	0.05	0	0.00
WEST SOUTH CENTRAL	2,990,518	430,905	14.41	41,409	1.38	10,050	0.34	85,038	2.84
Arkansas	373,494	80,579	21.57	4,039	1.08	375	0.10	2,397	0.64
Louisiana	670,486	104,390	15.57	15,060	2.25	0	0.00	82,641	12.33
Oklahoma	298,110	0	0.00	0	0.00	0	0.00	0	0.00
Texas	1,648,428	245,936	14.92	22,310	1.35	9,675	0.59	0	0.00
MOUNTAIN	2,076,769	124,832	6.01	106,229	5.12	925	0.04	52,415	2.52
Arizona	109,067	9,751	8.94	9,374	8.59	600	0.55	150	0.14
Colorado	1,139,536	18,424	1.70	50,147	4.40	325	0.03	27,896	2.45
Idaho	146,357	33,725	23.04	5,896	4.03	0	0.00	10,435	7.13
Montana	83,331	12,540	15.05	7,665	9.20	0	0.00	20	0.02
Nevada	123,194	18,834	15.29	4,369	3.55	0	0.00	0	0.00
New Mexico	242,209	10,160	4.19	19,033	7.86	0	0.00	6,029	2.49
Utah	139,991	7,916	5.65	9,745	6.96	0	0.00	4,133	2.95
Wyoming	93,084	12,482	13.41	0	0.00	0	0.00	3,752	4.03
PACIFIC	1,028,731	35,842	3.48	60,545	5.89	232	0.02	10,600	1.03
Alaska	111,510	86	0.08	0	0.00	0	0.00	2,685	2.41
California	110,682	4,581	4.14	17,537	15.84	232	0.21	6,622	5.98
Hawaii	58,925	11,422	19.38	36,974	62.75	0	0.00	1,289	2.19
Oregon	270,381	8,370	3.10	0	0.00	0	0.00	0	0.00
Washington	477,233	11,383	2.39	6,034	1.26	0	0.00	4	0.00
TERRITORIES	742,027	57,597	7.76	30,606	4.12	0	0.00	15,473	2.09
Guam	22,219	327	1.47	0	0.00	0	0.00	0	0.00
Puerto Rico	158,848	11,020	6.94	30,606	19.27	0	0.00	849	0.53
Virgin Islands	560,960	46,250	8.24	0	0.00	0	0.00	14,824	2.61

* New York did not report for fiscal year 1988.

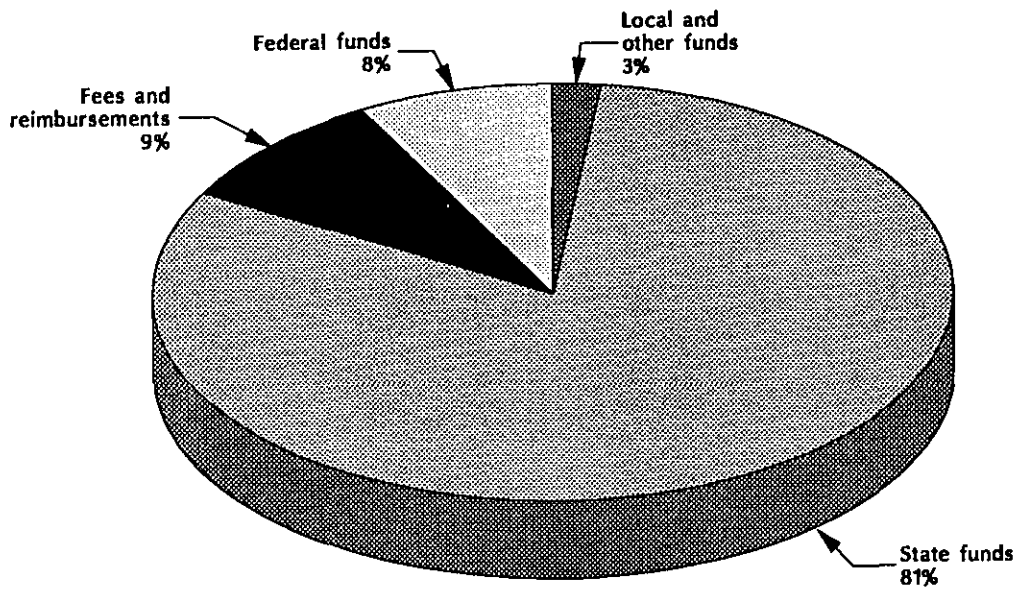
NOTE: NA = Data not available.

FIGURE 1.
STATE PUBLIC HEALTH LABORATORY SPECIMENS/SAMPLES,
BY CATEGORY, FISCAL YEAR 1988



TOTAL: 27.4 MILLION SPECIMENS/SAMPLES

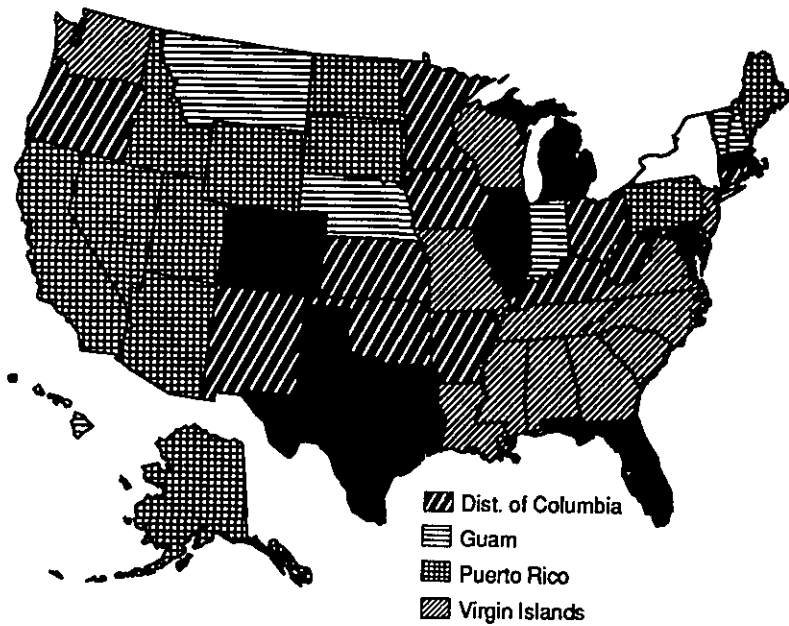
FIGURE 2.
STATE PUBLIC HEALTH LABORATORY PROGRAM EXPENDITURES,
BY SOURCE OF FUNDS, FISCAL YEAR 1987*



TOTAL: \$270.9 MILLION**

*Data were collected through the Public Health Foundation's annual survey of the nation's state health agencies.
 **Laboratory expenditures were estimated for the state health agencies in Maine, Montana, and the Virgin Islands, which did not participate in the Foundation's annual survey for FY 1987, the latest year for which data are available.

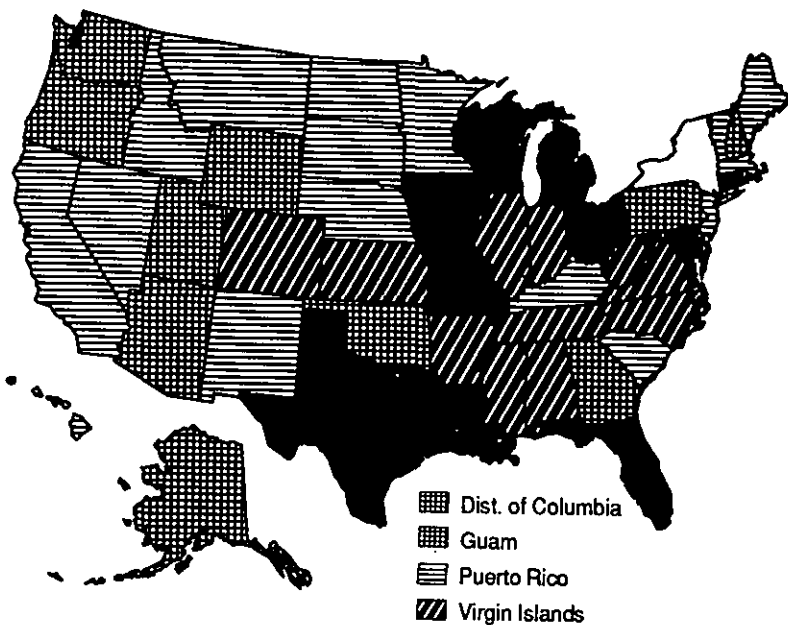
FIGURE 3A.
NUMBER OF DIAGNOSTIC SPECIMENS TESTED BY
STATE PUBLIC HEALTH LABORATORIES, FISCAL YEAR 1988



Range	N
More than 1 million	7
400,000 to 999,999	13
200,000 to 399,999	13
70,000 to 199,999	13
Less than 70,000	7
No data	1

TOTAL: 23.6 MILLION SPECIMENS

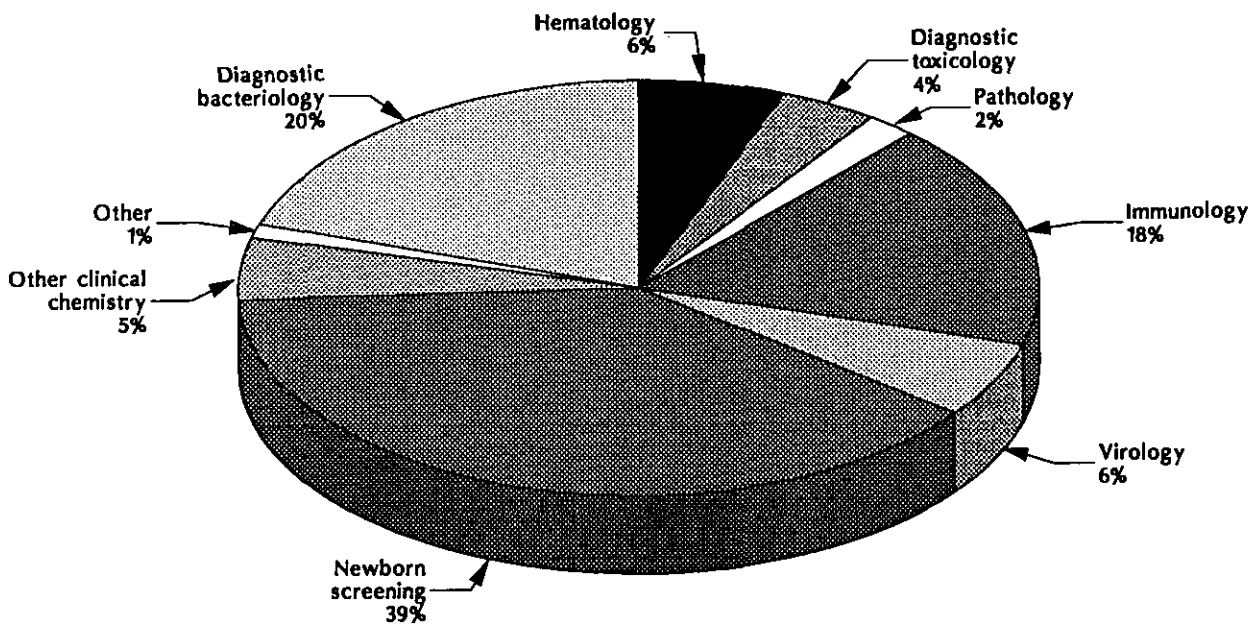
FIGURE 3B.
NUMBER OF ENVIRONMENTAL SAMPLES TESTED BY
STATE PUBLIC HEALTH LABORATORIES, FISCAL YEAR 1988



Range	N
More than 100,000	10
50,000 to 99,999	13
20,000 to 49,999	17
Less than 20,000	13
No data	1

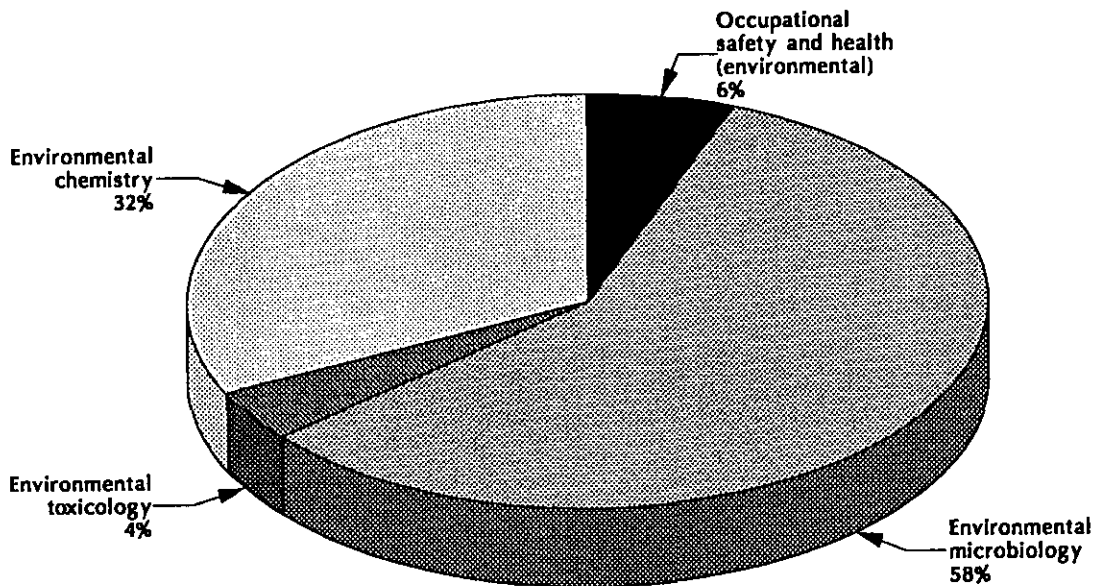
TOTAL: 3.8 MILLION SAMPLES

FIGURE 4A.
STATE PUBLIC HEALTH LABORATORY DIAGNOSTIC SPECIMENS,
BY CATEGORY, FISCAL YEAR 1988



TOTAL: 23.6 MILLION SPECIMENS

FIGURE 4B.
STATE PUBLIC HEALTH LABORATORY ENVIRONMENTAL SAMPLES,
BY CATEGORY, FISCAL YEAR 1988



TOTAL: 3.8 MILLION SAMPLES

***LABORATORY
DIAGNOSTIC
WORKLOAD***

TABLE 2. DIAGNOSTIC BACTERIOLOGY SPECIMENS

Lab & Region	Total Diagnostic Bacteriology Specimens	Type of specimen					
		Nasopharyngeal	Mycobacterial	Enteric	Gonococcus	Anaerobic	Other Bacteriology
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TOTAL	4,666,790	261,487	394,976	160,457	3,666,128	11,478	172,254
AVERAGE	88,063	7,081	7,745	3,027	69,172	273	3,589
NEW ENGLAND	221,741	29,059	42,042	16,587	128,753	211	5,089
Connecticut	43,646	5,051	4,322	2,995	30,179	64	1,035
Massachusetts	67,578	1,538	30,660	9,923	22,806	0	2,651
Maine	9,895	697	3,292	334	5,530	42	0
New Hampshire	17,727	439	1,839	102	14,814	5	528
Rhode Island	73,825	21,252	1,374	1,369	49,165	45	620
Vermont	9,070	82	555	1,864	6,259	55	255
MIDDLE ATLANTIC	163,654	3,984	10,120	8,229	140,560	54	707
New Jersey	155,278	3,945	7,130	3,520	140,473	7	201
New York*							
Pennsylvania	8,378	39	2,990	4,709	87	47	506
EAST NORTH CENTRAL	192,557	10,612	21,979	21,137	107,117	547	31,165
Illinois	68,036	909	4,800	9,724	51,085	78	1,440
Indiana	7,475	0	2,950	3,201	405	26	893
Michigan	44,787	256	8,643	3,433	22,459	108	9,868
Ohio	22,802	3,957	1,208	494	16,344	165	634
Wisconsin	49,477	5,490	4,378	4,285	16,824	170	18,330
WEST NORTH CENTRAL	314,021	27,507	21,294	13,022	241,241	472	10,485
Iowa	87,063	17,074	1,717	2,009	63,401	157	2,695
Kansas	36,951	166	3,626	3,034	29,305	184	636
Minnesota	85,362	357	10,755	2,375	71,761	85	29
Missouri	68,162	3,556	0	4,596	58,880	NA	1,130
Nebraska	8,444	159	574	47	7,469	0	195
North Dakota	16,095	5,694	2,146	412	2,487	40	5,316
South Dakota	11,954	501	2,476	549	7,938	6	484
SOUTH ATLANTIC	1,644,347	43,489	111,407	52,983	1,387,067	2,236	47,165
Delaware	46,960	4,320	1,094	390	38,295	0	2,861
District of Columbia	84,646	5,888	574	1,297	65,182	0	11,705
Florida	643,185	14,024	38,845	27,536	555,710	38	7,032
Georgia	237,248	5,330	14,231	2,685	208,978	91	5,733
Maryland	320,415	6,113	13,391	8,707	277,613	264	14,327
North Carolina	21,884	1,000	13,944	4,062	641	460	1,777
South Carolina	93,937	125	11,074	297	79,108	NA	3,333
Virginia	128,300	6,131	14,166	7,358	99,296	1,349	0
West Virginia	67,772	558	4,088	451	62,244	34	397
EAST SOUTH CENTRAL	859,645	32,900	62,764	10,867	716,539	1,641	34,934
Alabama	346,595	3,937	24,025	3,792	287,910	79	26,852
Kentucky	14,033	1,473	10,918	602	960	0	80
Mississippi	214,225	8,545	15,516	3,250	179,953	NA	6,961
Tennessee	284,792	18,945	12,305	3,223	247,716	1,562	1,041
WEST SOUTH CENTRAL	849,588	7,716	89,227	22,709	690,400	5,398	34,138
Arkansas	87,628	389	17,979	1,480	67,677	103	0
Louisiana	146,888	429	8,472	3,695	133,247	265	780
Oklahoma	71,689	1,609	6,721	1,185	62,090	44	20
Texas	543,403	5,289	56,055	16,349	427,386	4,986	33,338
MOUNTAIN	267,739	77,395	16,782	7,562	161,826	797	3,377
Arizona	25,795	178	2,746	970	21,725	4	172
Colorado	18,904	15,598	893	1,477	513	24	399
Idaho	33,203	4,271	1,502	818	25,427	700	485
Montana	7,474	514	1,687	682	4,591	NA	0
Nevada	46,800	1,367	1,667	1,861	40,893	28	984
New Mexico	55,523	173	6,500	1,288	47,000	28	534
Utah	21,310	0	1,460	377	18,662	8	803
Wyoming	58,730	55,294	327	89	3,015	5	0
PACIFIC	113,549	3,955	17,007	5,674	85,805	60	1,048
Alaska	58,591	855	6,417	1,547	49,483	25	264
California	6,758	129	364	101	5,922	NA	242
Hawaii	7,474	339	1,149	118	5,839	1	28
Oregon	5,919	243	3,411	1,834	382	5	44
Washington	34,807	2,389	5,666	2,074	24,179	29	470
TERRITORIES	39,949	24,880	2,354	1,687	6,820	62	4,146
Guam	9,160	8	2,289	257	4,825	0	1,781
Puerto Rico	4,118	1,299	0	344	122	6	2,347
Virgin Islands	26,671	23,573	65	1,086	1,873	56	18

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 3. DIAGNOSTIC BACTERIOLOGY-Nasopharyngeal Specimens-Streptococcus Beta Hemolytic, Group A

Lab & Region	Number of Specimens	Type of procedure						Other
		Culture	FA	Serogrouping	Serotyping	Bacitracin Disc		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
TOTAL	191,450	41	29	17	6	19		
AVERAGE	4,254							
NEW ENGLAND	16,511							
Connecticut	4,584	X	X	X		X		
Massachusetts	541	X	X					
Maine	32	X	X	X		X		
New Hampshire	110	X		X				
Rhode Island	11,244	X		X				
Vermont	0							
MIDDLE ATLANTIC	8							
New Jersey	0							
New York*								
Pennsylvania	8	X		X		X		
EAST NORTH CENTRAL	2,349							
Illinois	85	X		X		X		
Indiana	0							
Michigan	175	X				X		
Ohio	890	X		X				
Wisconsin	1,199	X	X			X		
WEST NORTH CENTRAL	25,862							
Iowa	16,695	X	X					
Kansas	0							
Minnesota	0							
Missouri	3,556	X	X					
Nebraska	81	X	X					
North Dakota	5,087		X					
South Dakota	443	X				X		
SOUTH ATLANTIC	33,558							
Delaware	4,320	X					Directigen	
District of Columbia	5,888	X		X	X	X		
Florida	6,274	X				X		
Georgia	4,627		X					
Maryland	5,737	X	X			X	Latex agglutination	
North Carolina	280	X	X	X				
South Carolina	69	X	X					
Virginia	5,925	X	X	X		X		
West Virginia	438	X	X					
EAST SOUTH CENTRAL	32,333							
Alabama	3,600	X	X					
Kentucky	1,406	X	X	X				
Mississippi	8,538	X	X					
Tennessee	18,789		X					
WEST SOUTH CENTRAL	4,614							
Arkansas	120	X	X	X	X	X		
Louisiana	4	X		X				
Oklahoma	720	X	X					
Texas	3,770	X	X	X		X		
MOUNTAIN	72,953							
Arizona	0							
Colorado	15,578	X	X					
Idaho	411	X	X		X			
Montana	456	X		X			Kit	
Nevada	1,293	X		X		X		
New Mexico	0							
Utah	0							
Wyoming	55,215	X	X			X		
PACIFIC	898							
Alaska	571	X	X			X		
California	3	X	X	X	X	X		
Hawaii	277	X	X					
Oregon	3	X	X					
Washington	42	X	X					
TERRITORIES	2,366							
Guam	8	X				X		
Puerto Rico	1,297	X			X	X		
Virgin Islands	1,061	X	X	X	X	X		

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 3. DIAGNOSTIC BACTERIOLOGY-Nasopharyngeal Specimens-Diphtheria (continued)

Lab & Region (1)	Number of Specimens (2)	Type of procedure				
		Direct Smear (3)	Culture (4)	Confirmatory Sugars (5)	Toxogenicity (6)	Other (7)
TOTAL	7,547	22	32	29	21	
AVERAGE	243					
NEW ENGLAND	18					
Connecticut	3	X	X	X	X	
Massachusetts	10	X	X	X	X	
Maine	0					
New Hampshire	0					
Rhode Island	3	X	X	X	X	
Vermont	0					
MIDDLE ATLANTIC	1					
New Jersey	0					
New York*						
Pennsylvania	1		X	X	X	
EAST NORTH CENTRAL	110					
Illinois	0					
Indiana	0					
Michigan	81	X	X	X	X	
Ohio	0					
Wisconsin	29		X	X	X	
WEST NORTH CENTRAL	58					
Iowa	8	X	X	X	X	
Kansas	0					
Minnesota	39	X	X		X	
Missouri	0					
Nebraska	0					
North Dakota	6	X	X	X	X	
South Dakota	5		X	X		
SOUTH ATLANTIC	6,277					
Delaware	0					
District of Columbia	0					
Florida	8,274		X	X	X	
Georgia	2	X	X			
Maryland	0					
North Carolina	0	X	X	X		
South Carolina	1	X	X	X		
Virginia	0					
West Virginia	0					
EAST SOUTH CENTRAL	14					
Alabama	11	X	X	X	X	Methylene blue stain
Kentucky	0					
Mississippi	1		X	X		
Tennessee	2	X	X	X	X	
WEST SOUTH CENTRAL	21					
Arkansas	5	X	X	X		
Louisiana	4	X	X	X		
Oklahoma	8	X	X	X		
Texas	4		X	X	X	
MOUNTAIN	43					
Arizona	11	X	X	X	X	
Colorado	10	X	X	X	X	
Idaho	10	X	X	X	X	
Montana	3		X	X	X	
Nevada	0					
New Mexico	9		X	X	X	
Utah	0					
Wyoming	0					
PACIFIC	90					
Alaska	10	X	X	X		
California	1	X	X	X	X	
Hawaii	0					
Oregon	31		X	X	X	
Washington	48		X	X	X	
TERRITORIES	917					
Guam	0					
Puerto Rico	1	X	X	X		
Virgin Islands	916	X	X			

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 3. DIAGNOSTIC BACTERIOLOGY-Nasopharyngeal Specimens-Pertussis (continued)

Lab & Region	Number of Specimens	Type of procedure			
		Culture	FA	Serological	Biochemicals
(1)	(2)	(3)	(4)	(5)	(6)
TOTAL	16,505	37	40	5	18
AVERAGE	393				
NEW ENGLAND	2,192				
Connecticut	199	X	X		
Massachusetts	987	X	X	X	X
Maine	665	X	X		
New Hampshire	254	X	X		X
Rhode Island	5	X	X		X
Vermont	82	X	X		X
MIDDLE ATLANTIC	30				
New Jersey	0				
New York*					
Pennsylvania	30		X		
EAST NORTH CENTRAL	1,525				
Illinois	824	X	X		
Indiana	0				
Michigan	0	X	X		
Ohio	171	X	X		
Wisconsin	530	X	X		X
WEST NORTH CENTRAL	1,125				
Iowa	371	X	X		X
Kansas	166		X		
Minnesota	175	X	X		X
Missouri	NA	X	X		
Nebraska	78		X		
North Dakota	282	X	X		
South Dakota	53		X		
SOUTH ATLANTIC	3,600				
Delaware	0				
District of Columbia	0				
Florida	1,476	X	X	X	
Georgia	701	X	X		
Maryland	322	X	X	X	X
North Carolina	720	X	X		X
South Carolina	55	X	X		X
Virginia	206		X		
West Virginia	120		X		
EAST SOUTH CENTRAL	367				
Alabama	140	X	X		X
Kentucky	67		X		
Mississippi	6	X			
Tennessee	154	X	X		
WEST SOUTH CENTRAL	1,804				
Arkansas	22	X	X	X	X
Louisiana	421	X	X		X
Oklahoma	692	X	X		
Texas	669	X	X		
MOUNTAIN	4,315				
Arizona	167	X	X		X
Colorado	10	X	X		
Idaho	3,850	X	X		
Montana	55	X	X		
Nevada	0				
New Mexico	164	X	X		X
Utah	0				
Wyoming	69	X	X		X
PACIFIC	1,546				
Alaska	259	X	X		
California	0				
Hawaii	60	X			
Oregon	196	X			X
Washington	1,031	X	X		
TERRITORIES	1				
Guam	0				
Puerto Rico	1	X		X	X
Virgin Islands	0				

* New York did not report for fiscal year 1988.
NOTE: NA = Data not available.

TABLE 3. DIAGNOSTIC BACTERIOLOGY-Nasopharyngeal Specimens-Other (continued)

Lab & Region	Number of Specimens	Disease/Type of procedure
(1)	(2)	(3)
TOTAL	45,995	
AVERAGE	2,190	
NEW ENGLAND	10,340	
Connecticut	265	Legionnaires' disease-FA, culture; Vincent's infection-smear; speciation-biochemicals
Massachusetts	0	
Maine	0	
New Hampshire	75	Haemophilus influenzae, Neisseria meningitidis, Beta Streptococcus (not group A)-culture, group; Streptococcus pneumoniae-culture, OPT disc.
Rhode Island	10,000	Gonococcus (throat) - culture, biochemicals, serology
Vermont	0	
MIDDLE ATLANTIC	3,945	
New Jersey	3,945	Clostridium botulinum - culture, mouse neutralization; Lyme disease and Legionella - IFA, DFA, culture
New York*		
Pennsylvania	0	
EAST NORTH CENTRAL	6,628	
Illinois	0	
Indiana	0	
Michigan	0	
Ohio	2,898	Staphylococcus - phage typing; anaerobes - culture and biochemicals
Wisconsin	3,732	Clostridium difficile-latex agglutination, toxin B assay, culture
WEST NORTH CENTRAL	462	
Iowa	0	
Kansas	0	
Minnesota	143	Food poisoning (Staphylococcus aureus, Bacillus cereus, Clostridium perfringens, Legionella)-culture, FA; Clostridium botulinum-culture, animal toxigenicity test; Brucella-culture, typing; Haemophilus ducreyi, Actinomyces israeli-culture
Missouri	0	
Nebraska	0	
North Dakota	319	Legionella - culture, DFA
South Dakota	0	
SOUTH ATLANTIC	54	
Delaware	0	
District of Columbia	0	
Florida	0	
Georgia	0	
Maryland	54	Streptococcus serogrouping - precipitin test
North Carolina	0	
South Carolina	0	
Virginia	0	
West Virginia	0	
EAST SOUTH CENTRAL	186	
Alabama	186	Legionellosis- DFA,culture; Botulism- animal toxicity,culture; Meningitis(invasive) and influenza(invasive)- biochemicals,serotyping
Kentucky	0	
Mississippi	0	
Tennessee	0	
WEST SOUTH CENTRAL	1,277	
Arkansas	242	Staphylococcus - culture, biochemicals
Louisiana	0	
Oklahoma	189	Abscess, Bacteremia, Conjunctivitis, Meningitis - culture
Texas	846	Haemophilus influenza, Neisseria meningitidis - culture, biochemicals, serotyping
MOUNTAIN	84	
Arizona	0	
Colorado	0	
Idaho	0	
Montana	0	
Nevada	74	Staphylococcus pharyngitis - culture, biochemical
New Mexico	0	
Utah	0	
Wyoming	10	Haemophilus influenzae - direct, biochemicals
PACIFIC	1,423	
Alaska	15	Pneumonia - culture; fever of unknown origin - microscopic exam, culture; Staphylococcus - microscopic exam, culture, catalase; Neisseria meningitidis - culture, biochemicals, serogrouping
California	125	Adult & infant botulism - toxin tests, culture
Hawaii	2	Neisseria meningitidis - culture
Oregon	13	Haemophilus influenzae - culture
Washington	1,268	Legionellosis - serology, FA, culture; Treponema pallidum - FA
TERRITORIES	21,596	
Guam	0	
Puerto Rico	0	
Virgin Islands	21,596	Reference cultures

* New York did not report for fiscal year 1988.
NOTE: NA = Data not available.

TABLE 4. DIAGNOSTIC BACTERIOLOGY-Mycobacterial Specimens

Lab & Region	Number of Specimens	Type of procedure								
		Direct Smear	Concentrate Smear	Culture	Direct Suscept.- No. of Drugs	Indirect Suscept.- No. of Drugs	No. of Biochemicals	Species Ident.	Genetic Probes	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
TOTAL	394,976	30	49	51	-	-	-	45	20	
AVERAGE	7,745									
NEW ENGLAND	42,042									
Connecticut	4,322	X	X	X	5	9	19	X		
Massachusetts	30,860		X	X	9	9	11	X	X	
Maine	3,292	X	X	X	6	6	4,5,8	X	X	
New Hampshire	1,839	X	X	X			7	X		
Rhode Island	1,374		X	X		9	12	X	X	
Vermont	555		X	X			12	X		
MIDDLE ATLANTIC	10,120									
New Jersey	7,130	X	X	X		4	13	X	X	Bactec 460
New York*										
Pennsylvania	2,990	X	X	X	5	5,9	3-13	X	X	Drug studies for species identification
EAST NORTH CENTRAL	21,979									
Illinois	4,800		X	X		5	9	X		
Indiana	2,950	X	X	X	6	6	6		X	
Michigan	8,643	X	X	X		9	15	X		
Ohio	1,208		X	X		10	9	X		
Wisconsin	4,378	X	X	X	5	5	13	X		
WEST NORTH CENTRAL	21,294									
Iowa	1,717	X	X	X	8	8	13	X		
Kansas	3,626		X	X	9	9	18	X		
Minnesota	10,755		X	X		9	15	X		
Missouri	0									
Nebraska	574	X	X	X		5	13	X		
North Dakota	2,146	X	X	X	10	10	15	X		
South Dakota	2,476		X	X		4	12	X		
SOUTH ATLANTIC	111,407									
Delaware	1,094	X	X	X						
District of Columbia	574	X		X		4	6	X	X	
Florida	38,845		X	X		7	12	X	X	
Georgia	14,231	X	X	X	9	9	12	X	X	
Maryland	13,391	X	X	X	11	11	14	X		Indirect susceptibility for rapid growers, Kirby-Bauer & agar dilution
North Carolina	13,944		X	X	4	4	10	X	X	2nd Line drugs - 8
South Carolina	11,074	X	X	X	3	3	8	X	X	Bactec - radiometric
Virginia	14,186		X	X	4	4	12	X	X	Bactec
West Virginia	4,088	X	X	X		5	9	X		
EAST SOUTH CENTRAL	62,764									
Alabama	24,025		X	X	8	8	17	X	X	Serotyping
Kentucky	10,918	X	X	X	8	8	9	X	X	Fluorochrome smear
Mississippi	15,516		X	X	7	7	6	X	X	
Tennessee	12,305		X	X		6	4	X		
WEST SOUTH CENTRAL	89,227									
Arkansas	17,979		X	X	6	6	15	X		
Louisiana	8,472		X	X		4		X	X	Radiometric assay - Bactec
Oklahoma	6,721	X	X	X	4		6	X		
Texas	56,055	X	X	X	8	8	14	X	X	
MOUNTAIN	16,782									
Arizona	2,746		X	X	7	7	15	X		
Colorado	893	X	X	X						
Idaho	1,502	X	X	X	5	5	14	X		
Montana	1,687	X	X	X	5	5	8	X		
Nevada	1,667	X	X	X	7	7	14	X		
New Mexico	6,500		X	X	4	4	8-12	X		Bactec
Utah	1,460	X	X	X	9	9	17	X	X	
Wyoming	327	X	X	X						
PACIFIC	17,007									
Alaska	6,417	X	X	X		4-6	5-8	X		
California	364	X	X	X	5	5-9	10	X	X	
Hawaii	1,149	X	X	X			3	X		
Oregon	3,411	X	X	X		7	10	X	X	
Washington	5,666		X	X	6	6	13	X		
TERRITORIES	2,354									
Guam	2,289		X	X						
Puerto Rico	0									
Virgin Islands	65			X	10		28			

* New York did not report for fiscal year 1988.
NOTE: NA = Data not available.

TABLE 5. DIAGNOSTIC BACTERIOLOGY-Enteric Specimens

Lab & Region	Number of Specimens	Type of procedure							Other
		Primary Plating	Enrichment Plating	Biochemicals	FA	Sero-grouping	Sero-typing	Phage Typing, S. typhi	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
TOTAL	160,457	52	52	52	7	50	49	5	
AVERAGE	3,027								
NEW ENGLAND	16,587								
Connecticut	2,995	X	X	X		X	X		Mouse bioassay; Clostridium perfringens spore count
Massachusetts	9,923	X	X	X		X	X		
Maine	334	X	X	X	X	X	X		
New Hampshire	102	X	X	X		X	X		
Rhode Island	1,369	X	X	X		X	X		
Vermont	1,864	X	X	X		X	X		
MIDDLE ATLANTIC	8,229								
New Jersey	3,520	X	X	X		X	X		Stool rectal swabs
New York*									
Pennsylvania	4,709	X	X	X		X	X	X	
EAST NORTH CENTRAL	21,137								
Illinois	9,724	X	X	X		X	X	X	
Indiana	3,201	X	X	X	X	X	X		
Michigan	3,433	X	X	X		X	X		
Ohio	494	X	X	X		X	X		
Wisconsin	4,285	X	X	X		X	X		
WEST NORTH CENTRAL	13,022								
Iowa	2,009	X	X	X		X	X		
Kansas	3,034	X	X	X		X	X		
Minnesota	2,375	X	X	X		X	X		
Missouri	4,596	X	X	X		X	X		
Nebraska	47	X	X	X		X	X		
North Dakota	412	X	X	X		X	X		
South Dakota	549	X	X	X		X	X		
SOUTH ATLANTIC	52,983								
Delaware	390	X	X	X		X	X		
District of Columbia	1,297	X	X	X		X	X		
Florida	27,536	X	X	X		X	X		
Georgia	2,885	X	X	X			X		
Maryland	8,707	X	X	X		X	X		Isolation/ID for : Vibrio, Yersinia, Campylobacter, Staphylococcus Bacillus cereus, Clostridium; Escherichia coli serotyping
North Carolina	4,062	X	X	X		X	X		
South Carolina	297	X	X	X		X	X		Tissue culture procedure for Clostridium difficile
Virginia	7,358	X	X	X		X	X		
West Virginia	451	X	X	X		X	X		
EAST SOUTH CENTRAL	10,867								
Alabama	3,792	X	X	X		X	X		
Kentucky	602	X	X	X		X	X		
Mississippi	3,250	X	X	X		X	X		
Tennessee	3,223	X	X	X		X	X		
WEST SOUTH CENTRAL	22,709								
Arkansas	1,480	X	X	X		X	X		
Louisiana	3,695	X	X	X		X	X		
Oklahoma	1,185	X	X	X			X		
Texas	16,349	X	X	X	X	X	X	X	Phage typing - Yersinia pestis
MOUNTAIN	7,562								
Arizona	970	X	X	X		X	X		
Colorado	1,477	X	X	X		X	X		
Idaho	818	X	X	X		X	X		
Montana	682	X	X	X		X			
Nevada	1,861	X	X	X		X			
New Mexico	1,288	X	X	X	X	X	X		Orig. culture, isolate for: Shigella serotyping, Salmonella serotyping, Campylobacter ID
Utah	377	X	X	X		X	X		Toxin assay for Escherichia coli, antibiotic disc diffusion
Wyoming	89	X	X	X			X		
PACIFIC	5,674								
Alaska	1,547	X	X	X		X	X		
California	101	X	X	X	X	X	X	X	Sensitivity tests
Hawaii	118	X	X	X		X			
Oregon	1,834	X	X	X	X	X	X	X	Plasmids
Washington	2,074	X	X	X	X	X	X		Plasmid electrophoresis
TERRITORIES	1,887								
Guam	257	X	X	X		X	X		
Puerto Rico	344	X	X	X		X			
Virgin Islands	1,086					X	X		

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 6. DIAGNOSTIC BACTERIOLOGY-Gonococcus Specimens

Lab & Region (1)	Number of Specimens (2)	Type of procedure							
		Smear (3)	Culture (4)	Oxidase Reaction (5)	FA (6)	Bio-chemical (7)	Beta-Lactamase (8)	Disc Diffusion Antibiotics (9)	Other (10)
TOTAL	3,668,128	51	52	50	29	48	51		
AVERAGE	69,172								
NEW ENGLAND	128,753								
Connecticut	30,179	X	X	X	X	X	X	Penicillin, tetracycline, spectinomycin	Susceptibility
Massachusetts	22,806	X	X	X	X	X	X	Penicillin, ceftioxin, spectinomycin, cefotaxime, tetracycline, ceftriaxone	
Maine	5,530	X	X	X	X	X	X	Tetracycline, penicillin, spectinomycin	
New Hampshire	14,814	X	X	X		X	X	Penicillin, tetracycline	
Rhode Island	49,165	X	X	X	X	X	X	Tetracycline, erythromycin, ceftriaxone, penicillin, spectinomycin	Agglutination
Vermont	6,259	X	X	X	X	X	X		
MIDDLE ATLANTIC	140,560								
New Jersey	140,473	X	X	X		X	X	Penicillin, spectinomycin, tetracycline, ceftriaxone	
New York*									
Pennsylvania	87	X	X	X		X	X	Penicillin, tetracycline	
EAST NORTH CENTRAL	107,117								
Illinois	51,085	X	X	X		X	X	Penicillin, spectinomycin, tetracycline	Coagglutination
Indiana	405	X	X	X	X	X	X	Penicillin, tetracycline, spectinomycin	
Michigan	22,459	X	X	X		X	X	Penicillin, spectinomycin, tetracycline	
Ohio	16,344	X	X	X		X	X	Penicillin, tetracycline	
Wisconsin	16,824	X	X	X		X	X		Phadebact coagglutination-monoclonal reagent
WEST NORTH CENTRAL	241,241								
Iowa	63,401	X	X	X	X	X	X	Penicillin, tetracycline, spectinomycin	
Kansas	29,305	X	X	X	X	X	X	Penicillin, spectinomycin, ceftriaxone, tetracycline	
Minnesota	71,761	X	X	X	X	X	X	Penicillin G, tetracycline, erythromycin, spectinomycin	Gonozyme
Missouri	58,880	X	X	X	X	X	X		Gram stain
Nebraska	7,469	X	X	X	X	X	X	Ceftriaxone, penicillin, tetracycline, spectinomycin	
North Dakota	2,487	X	X	X		X	X		Abbott gonozyme
South Dakota	7,938	X	X	X		X	X		EIA
SOUTH ATLANTIC	1,387,067								
Delaware	38,295								
District of Columbia	65,182	X	X	X		X	X	Penicillin, tetracycline	
Florida	555,710	X	X	X		X	X	Penicillin, tetracycline, spectinomycin, ceftriaxone	
Georgia	208,978	X	X	X		X	X	Penicillin, tetracycline, spectinomycin	Coagglutination (Phadebact)
Maryland	277,613	X	X	X	X	X	X	Penicillin, tetracycline, spectinomycin, ceftriaxone	Coagglutination
North Carolina	841	X	X	X	X	X	X	Penicillin	Genetic probe
South Carolina	79,108	X	X		X	X	X		
Virginia	99,296	X	X	X	X	X	X	Penicillin, spectinomycin, tetracycline	
West Virginia	62,244	X	X	X	X	X	X	Penicillin G, tetracycline, spectinomycin	
EAST SOUTH CENTRAL	716,539								
Alabama	287,910	X	X	X	X		X	Penicillin, spectinomycin, tetracycline	MTM media with tetracycline, phadebact monoclonal coagglut.
Kentucky	960	X	X	X	X	X	X	Penicillin, tetracycline	
Mississippi	179,953	X	X	X		X	X	Tetracycline, penicillin, ceftriaxone, spectinomycin	Coagglutination
Tennessee	247,716	X	X	X	X	X	X		
WEST SOUTH CENTRAL	690,400								
Arkansas	67,677	X	X	X		X	X	Penicillin	
Louisiana	133,247	X	X	X		X	X	Penicillin, tetracycline	Monoclonal antibody
Oklahoma	62,090	X	X	X		X	X	Tetracycline	
Texas	427,386	X	X	X		X	X	Penicillin, tetracycline, spectinomycin	Coagglutination test
MOUNTAIN	161,826								
Arizona	21,725	X	X	X	X	X	X		EIA - gonozyme, coagglut.
Colorado	513	X	X	X	X	X	X		
Idaho	25,427	X	X	X	X	X	X	Penicillin G, spectinomycin, tetracycline	
Montana	4,591		X	X		X	X	Penicillin, spectinomycin, tetracycline	
Nevada	40,893	X	X	X			X	Tetracycline, spectinomycin	
New Mexico	47,000	X	X	X	X	X	X	Penicillin, spectinomycin, tetracycline	Agglutination
Utah	18,662	X	X	X	X	X	X		
Wyoming	3,015	X	X	X	X	X	X		
PACIFIC	85,805								
Alaska	49,483	X	X	X	X		X		Phadebact/gonogen
California	5,922	X	X	X	X	X	X	Penicillin, spectinomycin, ceftriaxone, tetracycline	
Hawaii	5,839	X	X	X	X	X	X		
Oregon	382	X	X	X		X	X		
Washington	24,179	X	X	X	X	X	X	Spectinomycin, penicillin, tetracycline	
TERRITORIES	6,820								
Guam	4,825	X	X	X		X	X	Penicillin disc	
Puerto Rico	122	X	X	X		X	X	Kirby bauer	
Virgin Islands	1,873	X	X						

* New York did not report for fiscal year 1988.
NOTE: NA = Data not available.

TABLE 7. DIAGNOSTIC BACTERIOLOGY-Anaerobic Specimens

Lab & Region	Number of Specimens	Type of technique				Type of procedure					
		Pre-reduced Media	Gas Chromatography	Gram Stain	Plating	Sub-Culture	Bio-chemical	FA	GLC	Other	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
TOTAL	11,478	28	23	45	46	46	46	10	24		
AVERAGE	273										
NEW ENGLAND	211										
Connecticut	64		X	X	X	X	X	X	X		
Massachusetts	0										
Maine	42	X	X	X	X	X	X	X	X		
New Hampshire	5			X	X	X	X			Sensitivities-broth/disc elution	
Rhode Island	45	X		X	X	X	X				
Vermont	55			X	X	X	X		X	Susceptibility disc diffusion	
MIDDLE ATLANTIC	54										
New Jersey	7			X	X		X				
New York*											
Pennsylvania	47	X		X	X	X	X				
EAST NORTH CENTRAL	547										
Illinois	78		X	X	X	X			X		
Indiana	26	X	X	X	X	X	X	X	X		
Michigan	108	X	X	X	X	X	X		X		
Ohio	165	X	X	X	X	X	X		X	Botulism tests & cultures	
Wisconsin	170	X	X	X	X	X	X		X		
WEST NORTH CENTRAL	472										
Iowa	157	X	X	X	X	X	X		X	Botulism toxin	
Kansas	184			X	X	X	X				
Minnesota	85			X	X	X	X		X		
Missouri	NA	X	X	X	X	X	X	X	X		
Nebraska	0										
North Dakota	40	X		X	X	X	X				
South Dakota	6			X	X	X	X				
SOUTH ATLANTIC	2,236										
Delaware	0										
District of Columbia	0										
Florida	38	X		X	X	X	X				
Georgia	91	X	X	X	X	X	X		X		
Maryland	264		X	X	X	X	X	X	X	Mouse inoculation	
North Carolina	460	X	X	X	X	X	X	X	X	Latex agglutination- Clostridium difficile	
South Carolina	NA	X	X	X	X	X	X		X		
Virginia	1,349	X	X	X	X	X	X		X		
West Virginia	34			X	X	X	X				
EAST SOUTH CENTRAL	1,641										
Alabama	79			X	X	X	X	X			
Kentucky	0										
Mississippi	NA				X	X	X			Microscan	
Tennessee	1,562		X	X	X	X	X		X		
WEST SOUTH CENTRAL	5,398										
Arkansas	103	X	X	X	X	X	X		X		
Louisiana	265	X	X	X	X	X	X		X		
Oklahoma	44	X		X	X	X	X				
Texas	4,986		X	X	X	X	X	X	X	Toxicity tests(in vitro), Clostridium botulinum toxin tests	
MOUNTAIN	797										
Arizona	4		X	X	X	X	X		X		
Colorado	24	X		X	X	X	X				
Idaho	700			X	X	X	X				
Montana	NA	X		X	X	X	X				
Nevada	28			X	X	X	X				
New Mexico	28	X	X	X	X	X	X	X	X	Animal inoculation	
Utah	8			X	X	X	X			Botulism cult. & toxin detection via mouse innoc.	
Wyoming	5	X		X	X	X	X				
PACIFIC	60										
Alaska	25	X		X	X	X	X				
California	NA	X	X	X	X	X	X	X	X		
Hawaii	1	X	X	X	X	X	X				
Oregon	5	X				X	X				
Washington	29	X	X	X	X	X	X		X	Antibiogram	
TERRITORIES	62										
Guam	0										
Puerto Rico	6	X		X	X	X	X			API 20 A	
Virgin Islands	56			X	X	X	X				

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 8. DIAGNOSTIC BACTERIOLOGY-Other Diagnostic Bacteriology Specimens

Lab & Region	Number of Specimens	Disease/Type of procedure
(1)	(2)	(3)
TOTAL	172,254	
AVERAGE	3,665	
NEW ENGLAND	6,089	
Connecticut	1,035	Genital smears; nosocomial infections-phage typing; clinical cultures-FA, culture; referred cultures
Massachusetts	2,651	Meningococcal typing, Haemophilus influenzae typing, S. phymantias typing, Legionnaire's disease, Botulism
Maine	0	
New Hampshire	528	Meningitis, Pneumonia, UTI, Septicemia, wounds-culture, group, sensi., bios.
Rhode Island	620	Misc. reference cultures - cultura, biochemicals
Vermont	255	Legionellosis - culture, DFA; misc. bacteria (wounds, spinal fluid, sputum, blood cult, reference cultures, etc.) - standard procedures: gram stains, plating, biochemicals, serology
MIDDLE ATLANTIC	707	
New Jersey	201	Referred aerobic cultures
New York*		
Pennsylvania	506	Legionella - culture, DFA; Botulism - mouse neutralization
EAST NORTH CENTRAL	31,165	
Illinois	1,440	Staphylococcus infections - phage typing; Vincent's angina - smear; Legionella & misc. infections - culture
Indiana	893	Staphylococcus phage typing - plating; Legionella - plating, IFA, & GLC; Ref. cultures - biochem/plating
Michigan	9,888	Food poisoning - cult., aerobic/anaerobic; toxin testing - Staphylococcus aureus, Clostridium difficile; wound & urine cult. - aerobic/anaerobic cult.; Salmonella, Shigella species - serotyping; ref. aerobes - smear, culture, biochemical; Staphylococcus - phage typing, molecular biology
Ohio	634	Legionella, Mycoplasma, Ureaplasma - culture, FA
Wisconsin	18,330	Aerobes-cult., sens.; MICs, serum levels-microdilution, bioassay, Schlichter's; ref. cult.-VIP methods; Legionellosis-cult., DFA; Lyme disease-serology, IFA cult.; toxic shock syndrome-cult., toxin analysis; bacterial food poisoning - cult., toxin analysis, biochem.
WEST NORTH CENTRAL	10,485	
Iowa	2,695	Misc. diseases - culture, biochem
Kansas	636	Ref. bacteriology - conventional procedures, food bacteriology - referred to FDA
Minnesota	29	Misc. referred cultures - tubed and plated media
Missouri	1,130	Bordetella pertussis, Francisella tularensis - culture, biochem ID, DFA; Neisseria meningitidis - culture, typing, grouping; Haemophilus influenza - culture; Legionnaires - culture, FA; misc. - culture, biochem ID
Nebraska	195	Hospital reference work
North Dakota	5,316	Susceptibilities - Autocan IV MIC; blood, urine, CSF; misc. and reference cultures - isolation & identification
South Dakota	484	UTI - plating; lower respiratory tract - subculture; ear/eye/aerobic wound - biochemicals; misc., reference, ID - gram stain
SOUTH ATLANTIC	47,165	
Delaware	2,861	Urine, miscellaneous, reference, blood, respiratory
District of Columbia	11,705	Urine, wound, referral id - culture, biochemical, susceptibility
Florida	7,032	Eye/ear/spinal fluid/blood/urine/other exud. & body fluids and ref. - smear, cult.; sens. testing - disc; rheumatic fever prophylaxis - micro. inhibition
Georgia	5,733	Blister, eye, lesion, pus, urine - gram stain, plating, subculture, sensitivities, biochemicals
Maryland	14,327	Urine cult.-gr. stain; sputum cult.-acid-fast stain; eye/ear cult.-primary isolation; blood cult.-subcult.; body/tissue cult.-biochem.; ref. cult.-kirby bauer tests; phage typing - serologic tests; suscept. testing - agglut., precipitin, latex agglut., FA, & animal innoc.
North Carolina	1,777	Legionellosis - culture, FA, serology; reference and clinical specimens (misc.) - smear, culture, biochemicals, serotype
South Carolina	3,333	Isolates for ID - misc.; direct smears - staining & microscopic observation; UTI - colon counts; drug suscept. - Kirby-Bauer
Virginia	0	
West Virginia	397	Isolate identification-plating, biochemical, serogrouping, serotyping
EAST SOUTH CENTRAL	34,934	
Alabama	26,852	UTI-culture, biochem, identification, sens.; Campylobacteriosis, Brucellosis-culture, biochem; Vibriosis - culture, biochem, serology
Kentucky	80	Legionnaires disease - DFA; misc. cultures - biochemicals, coagulase smear, serogrouping
Mississippi	6,961	Urine cult.-plating, subcult., biochem, bacterial sens. tests; misc. waters-primary/enrichment plating, biochem, serotyping, subcult., serogrouping; misc. culture-plating, selective subculture, biochem
Tennessee	1,041	Misc. aerobic, reference, & clinical isolates - bacterial isolation procedures.
WEST SOUTH CENTRAL	34,138	
Arkansas	0	
Louisiana	780	Referral cultures for identification
Oklahoma	20	Reference specimens - culture
Texas	33,338	Legionellosis - culture, FA; Staphylococcosis - culture, biochem, phage typing
MOUNTAIN	3,377	
Arizona	172	Legionella - DFA (culture); Yersinia pestis - DFA; Francisella tularensis, Haemophilus influenza, Neisseria meningitidis - culture, gram stain, biochem, serotyping; misc. gram neg. bacteria - culture, gram stain, biochem; gram + cocci - culture, gram stain
Colorado	399	Escherichia coli 0157:H7 - plating/serology; misc. - plating/biochemicals
Idaho	485	Reference biology - King-Weaver system
Montana	0	
Nevada	984	Urine and reference cultures - various procedures
New Mexico	534	Legionella - FA, culture; Tularemia - FA, culture, biochemical; plague - FA, culture, biochemical, phage
Utah	803	Pneumonia & Meningitis septicemia & referred cultures - culture, typing, biochemicals; plague, Tularemia, Legionella - culture, FA
Wyoming	0	
PACIFIC	1,048	
Alaska	264	Misc. aerobic infections - microscope exam, culture, biochemicals, special stains & discs.
California	242	Plague - animals, culture, FA; Legionnaires - culture, FA; relapsing fever - animal, culture; misc. - culture
Hawaii	28	Meningitis (CSF), Septicemia (blood), urine (Neisseria meningitidis), vaginitis, hemoptysis (sputum), wound, Otitis, semen, Leptospirosis (urine) - cult.
Oregon	44	Campylobacter - culture identification; Neisseria meningitidis - culture typing; Clostridium botulinum - culture identification & toxin
Washington	470	Tularemia - FA, GC, culture; Brucellosis - cultures, GC; plague - FA, GC, biochem; Botulism - biochem, mouse toxin
TERRITORIES	4,148	
Guam	1,781	Trichomonas & monilia - wet mount and culture; urines (C & S), cervical, eye, ear, misc., culture - culture
Puerto Rico	2,347	UTI, Otitis - culture, biochemical
Virgin Islands	18	Reference cultures

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 9. MYCOLOGY SPECIMENS

Lab & Region	Number of Specimens	Type of procedure						Other
		Micro. Wet Mounts	Micro. Stains	Culture	FA	Biochemicals	Animal Inoculation	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
TOTAL	55,907	45	42	46	2	44	9	
AVERAGE	1,190							
NEW ENGLAND	3,306							
Connecticut	1,042	X	X	X		X		Differentiation media
Massachusetts	557	X	X	X		X		Exoantigen test
Maine	928	X	X	X		X		
New Hampshire	294	X	X	X		X		
Rhode Island	288	X	X	X		X		
Vermont	219	X	X	X		X		Hair culture, slide culture, amino acid requirements
MIDDLE ATLANTIC	663							
New Jersey	663	X	X	X		X		
New York*								
Pennsylvania	0							
EAST NORTH CENTRAL	9,844							
Illinois	641	X	X	X		X		
Indiana	623	X	X	X		X	X	Exoantigen
Michigan	1,545	X	X	X		X		
Ohio	861		X	X		X		
Wisconsin	6,174	X	X	X		X	X	Susceptibility testing, bioassays
WEST NORTH CENTRAL	5,774							
Iowa	1,498	X	X	X		X		Microimmunodiffusion
Kansas	791	X	X	X		X		Immunodiffusion
Minnesota	2,857	X	X	X		X		Exoantigen test
Missouri	330	X	X	X		X	X	
Nebraska	0							
North Dakota	239	X	X	X		X		Abbott yeast ID
South Dakota	59	X	X	X		X		
SOUTH ATLANTIC	14,941							
Delaware	4,126	X	X	X		X		
District of Columbia	0							
Florida	2,067	X	X	X		X		
Georgia	700	X	X	X		X		
Maryland	2,708	X	X	X		X		Hair perforation test
North Carolina	1,347	X	X	X		X		
South Carolina	1,348	X	X	X			X	
Virginia	2,142	X	X	X		X	X	
West Virginia	503	X	X	X		X		
EAST SOUTH CENTRAL	7,227							
Alabama	4,287	X	X	X		X	X	Exoantigens
Kentucky	0							
Mississippi	1,158	X	X	X		X		Hair culture
Tennessee	1,782	X	X	X		X		
WEST SOUTH CENTRAL	10,891							
Arkansas	2,297	X	X	X		X		
Louisiana	1,335	X	X	X		X		
Oklahoma	776	X		X		X		Exoantigen
Texas	6,483	X	X	X		X	X	Exoantigens
MOUNTAIN	2,419							
Arizona	441	X		X		X		Exoantigen for Coccidioides immitis & Histoplasma capsulatum
Colorado	149	X	X	X		X		
Idaho	253	X	X	X	X	X		Exoantigen test
Montana	225	X		X		X		
Nevada	42	X	X	X		X		
New Mexico	1,000		X	X		X		Exoantigen
Utah	160	X	X	X		X	X	
Wyoming	149	X	X	X				
PACIFIC	672							
Alaska	224	X	X	X		X		Germ tube, API, Tichophyton identification
California	45	X	X	X	X	X	X	
Hawaii	282	X	X	X		X		
Oregon	0							
Washington	121	X	X	X		X		Immunodiffusion
TERRITORIES	170							
Guam	152	X		X		X		LPCB (cotton blue)
Puerto Rico	0							
Virgin Islands	18	X						

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 10. PARASITOLOGY SPECIMENS

Lab & Region	Total Parasitology Specimens	Type of specimen	
		Intestinal	Other
(1)	(2)	(3)	(4)
TOTAL	232,524	230,662	1,862
AVERAGE	4,472	4,436	50
NEW ENGLAND	12,805	12,737	68
Connecticut	2,391	2,361	30
Massachusetts	661	626	35
Maine	365	365	0
New Hampshire	24	24	0
Rhode Island	5,024	5,021	3
Vermont	4,340	4,340	0
MIDDLE ATLANTIC	870	797	73
New Jersey	804	745	59
New York*			
Pennsylvania	66	52	14
EAST NORTH CENTRAL	27,537	27,374	163
Illinois	4,065	4,050	15
Indiana	3,256	3,240	16
Michigan	10,392	10,301	91
Ohio	592	592	0
Wisconsin	9,232	9,191	41
WEST NORTH CENTRAL	24,238	24,056	182
Iowa	5,404	5,284	120
Kansas	6,676	6,674	2
Minnesota	3,893	3,838	55
Missouri	4,827	4,827	0
Nebraska	217	217	0
North Dakota	1,112	1,107	5
South Dakota	2,109	2,109	0
SOUTH ATLANTIC	107,181	106,425	756
Delaware	833	325	508
District of Columbia	0	0	0
Florida	58,544	58,507	37
Georgia	18,279	18,266	13
Maryland	11,066	11,014	52
North Carolina	5,603	5,518	85
South Carolina	4,049	4,002	47
Virginia	6,583	6,583	0
West Virginia	2,224	2,210	14
EAST SOUTH CENTRAL	25,060	25,020	40
Alabama	9,794	9,768	26
Kentucky	3,164	3,164	0
Mississippi	8,663	8,663	0
Tennessee	3,439	3,425	14
WEST SOUTH CENTRAL	11,602	11,364	238
Arkansas	1,821	1,811	10
Louisiana	6,810	6,606	4
Oklahoma	1,523	1,482	41
Texas	1,648	1,465	183
MOUNTAIN	9,620	9,493	127
Arizona	90	75	15
Colorado	2,125	2,120	5
Idaho	960	912	48
Montana	1,374	1,374	0
Nevada	2,546	2,503	43
New Mexico	2,073	2,057	16
Utah	299	299	0
Wyoming	153	153	0
PACIFIC	10,273	10,044	229
Alaska	3,049	3,030	19
California	838	667	171
Hawaii	364	363	1
Oregon	1,953	1,949	4
Washington	4,069	4,035	34
TERRITORIES	3,338	3,332	6
Guam	514	514	0
Puerto Rico	1,224	1,224	0
Virgin Islands	1,600	1,594	6

* New York did not report for fiscal year 1988.
NOTE: NA = Data not available.

TABLE 11. PARASITOLOGY-Intestinal Specimens

Lab & Region	Number of Specimens	Type of procedure				
		Gross	Direct (including Pinworms)	Concentration Smear	Stained Smear	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)
TOTAL	230,662	37	46	52	46	
AVERAGE	4,436					
NEW ENGLAND	12,737					
Connecticut	2,361	X	X	X	X	
Massachusetts	626	X	X	X	X	
Maine	365	X	X	X		
New Hampshire	24		X	X	X	
Rhode Island	5,021		X	X		
Vermont	4,340	X	X	X	X	Worm identification
MIDDLE ATLANTIC	797					
New Jersey	745	X	X	X	X	Modified Kinyon acid-fast stain
New York*						
Pennsylvania	52	X	X	X	X	
EAST NORTH CENTRAL	27,374					
Illinois	4,050	X	X	X	X	
Indiana	3,240	X	X	X	X	
Michigan	10,301	X	X	X	X	
Ohio	592		X	X	X	
Wisconsin	9,191	X	X	X	X	
WEST NORTH CENTRAL	24,056					
Iowa	5,284	X	X	X	X	
Kansas	6,674		X	X	X	
Minnesota	3,838	X		X		Formalin, ethyl acetate concentration
Missouri	4,827	X	X	X	X	Isolation of Naegleria
Nebraska	217		X	X	X	
North Dakota	1,107		X	X	X	Fluorochrome
South Dakota	2,109	X	X	X	X	
SOUTH ATLANTIC	106,425					
Delaware	325	X	X	X	X	
District of Columbia	0					
Florida	58,507		X	X	X	
Georgia	18,266		X	X	X	
Maryland	11,014		X	X	X	Sheathers sucrose floatation - Cryptosporidium; acid-fast stain; auramine stain
North Carolina	5,518	X	X	X	X	Mounted & stained worms/segments, Cryptosporidium sp. - conc./staining
South Carolina	4,002	X	X	X	X	
Virginia	6,583	X	X	X	X	FA
West Virginia	2,210	X	X	X	X	
EAST SOUTH CENTRAL	25,020					
Alabama	9,768		X	X		Cryptosporidium
Kentucky	3,164	X	X	X	X	
Mississippi	8,663		X	X	X	
Tennessee	3,425		X	X	X	
WEST SOUTH CENTRAL	11,384					
Arkansas	1,811	X	X	X	X	
Louisiana	6,606	X	X	X	X	
Oklahoma	1,482	X		X	X	
Texas	1,485	X	X	X	X	Truant's acid fast stain (Cryptosporidium), clearing/identification for adult worms
MOUNTAIN	9,493					
Arizona	75	X	X	X	X	
Colorado	2,120	X	X	X	X	
Idaho	912	X	X	X	X	
Montana	1,374			X	X	
Nevada	2,503	X	X	X	X	
New Mexico	2,057			X	X	Cryptosporidium smear
Utah	299	X	X	X	X	
Wyoming	153	X	X	X	X	
PACIFIC	10,044					
Alaska	3,030	X	X	X	X	
California	667	X	X	X	X	Reference cultures
Hawaii	363	X	X	X	X	
Oregon	1,949	X	X	X	X	
Washington	4,035	X	X	X	X	Cryptosporidium acid-fast stain
TERRITORIES	3,332					
Guam	514	X	X	X	X	Test for occult blood
Puerto Rico	1,224	X		X		
Virgin Islands	1,594			X		

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 12. PARASITOLOGY-Other Parasitology Specimens

Lab & Region	Number of Specimens	Type of specimen			
		Malaria	Trichinosis	Toxoplasmosis	Other Disease/Type of procedure
(1)	(2)	(3)	(4)	(5)	(6)
TOTAL	1862	33	8	8	
AVERAGE	50				
NEW ENGLAND	68				
Connecticut	30	X	X		Material for identification; arthropod identification
Massachusetts	35	X			Fish parasites, environmental, arthropods
Maine	0				
New Hampshire	0				
Rhode Island	3	X			
Vermont	0				
MIDDLE ATLANTIC	73				
New Jersey	59	X	X		
New York*					
Pennsylvania	14	X			Fly larvae, tick identification
EAST NORTH CENTRAL	163				
Illinois	15	X			Worms
Indiana	16	X			Arthropods
Michigan	91	X			Worm identification
Ohio	0				
Wisconsin	41	X			
WEST NORTH CENTRAL	182				
Iowa	120	X	X	X	Free living amoeba (Naegleria/Acanthamoeba), pneumocystis
Kansas	2	X			
Minnesota	55				Pinworms, blood parasites, paragonimus
Missouri	0				
Nebraska	0				
North Dakota	5	X		X	
South Dakota	0				
SOUTH ATLANTIC	756				
Delaware	508				Trichomonas
District of Columbia	0				
Florida	37	X		X	
Georgia	13	X			Ectoparasites
Maryland	52	X	X		Culture for acanthamoeba species; exam for round worms in tissue
North Carolina	85	X			Arthropod ID, H2O-Giardia
South Carolina	47	X			ID - program & adult
Virginia	0				
West Virginia	14	X			Insect ID
EAST SOUTH CENTRAL	40				
Alabama	26	X			Ticks, specimens for identification
Kentucky	0				
Mississippi	0				
Tennessee	14	X			
WEST SOUTH CENTRAL	218				
Arkansas	10	X		X	
Louisiana	4	X	X		Oocult blood
Oklahoma	41	X			Cryptosporidium
Texas	163	X	X	X	Chagas' disease - animal innoc., cult.; urine (Schistosomiasis); CSF & H2O - Naegleria & Acanthamoeba spp.; Amoebiasis - liver abscess material; Filariasis (blood films); Pneumocystis carinii (lung biopsy/sputum); water - Giardia/Cryptosporidium
MOUNTAIN	127				
Arizona	15	X		X	
Colorado	5				Particulate analysis of water filters
Idaho	48	X	X	X	
Montana	0				
Nevada	43				Proficiency, arthropod ID
New Mexico	16	X			Worm identification
Utah	0				
Wyoming	0				
PACIFIC	229				
Alaska	19	X			Arthropod
California	171	X	X	X	Pinworm preps, proglottids, reference specimens
Hawaii	1	X			
Oregon	4	X			Cryptosporidium
Washington	34	X			Sputum, arthropods
TERRITORIES	6				
Guam	0				
Puerto Rico	0				
Virgin Islands	6	X			

* New York did not report for fiscal year 1988.
NOTE: NA = Data not available.

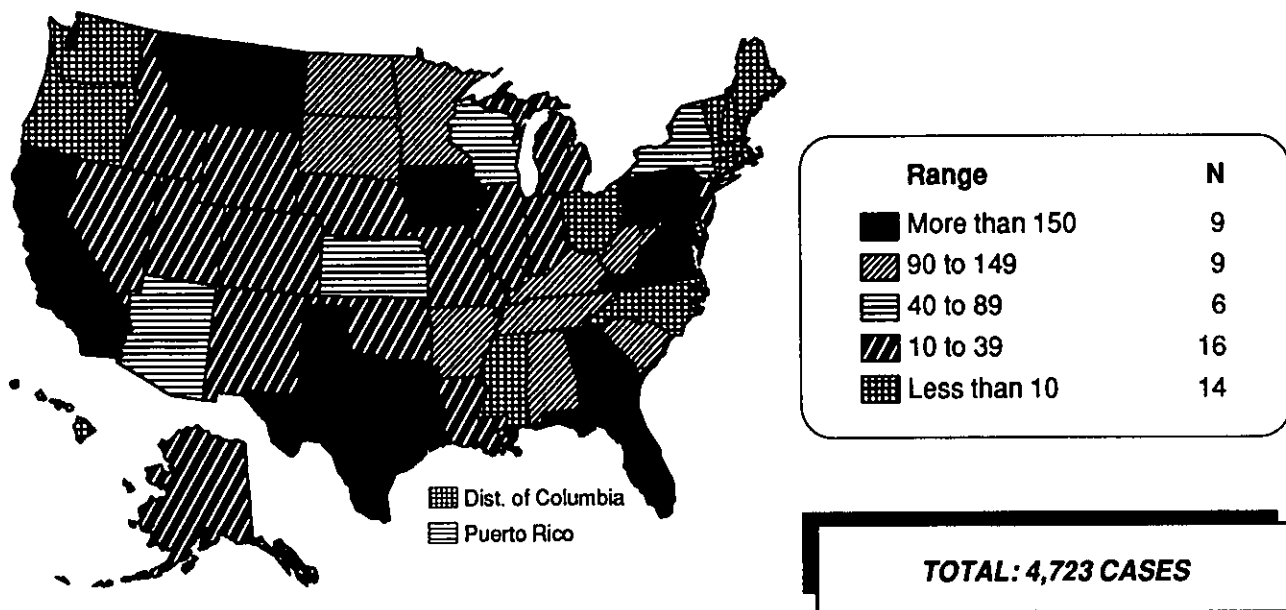
TABLE 13. VIROLOGY SPECIMENS

Lab & Region	Total Virology Specimens	Rabies Specimens	Viral Isolations	Rickettsial Identification Isolations	HIV Specimens	Chlamydia Specimens	Herpes Simplex	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
TOTAL	1,481,828	66,625	114,664	15,889	659,579	504,351	60,564	60,356
AVERAGE	28,497	1,418	2,940	3,138	14,990	11,463	1,730	3,550
NEW ENGLAND	81,541	1,578	7,787	0	43,929	17,737	9,882	628
Connecticut	20,671	360	4,449	0	8,020	0	7,842	0
Massachusetts	16,682	625	1,368	0	10,360	4,015	314	0
Maine	19,091	179	1,856	0	7,308	7,892	1,228	628
New Hampshire	12,499	269	44	0	7,601	4,087	498	0
Rhode Island	12,391	50	0	0	10,598	1,743	0	0
Vermont	207	95	70	0	42	0	0	0
MIDDLE ATLANTIC	81,012	3,933	9,264	9	30,128	1,485	894	35,299
New Jersey	77,318	1,967	8,481	9	29,224	1,485	853	35,299
New York*								
Pennsylvania	3,694	1,966	783	0	904	0	41	0
EAST NORTH CENTRAL	222,447	10,365	19,337	5,683	83,549	90,270	13,177	66
Illinois	18,756	1,708	2,702	0	12,100	1,702	544	0
Indiana	25,188	2,132	400	0	12,980	9,067	609	0
Michigan	51,060	1,966	1,050	0	36,293	8,875	2,810	66
Ohio	22,727	2,603	10,150	5,683	428	149	3,714	NA
Wisconsin	104,716	1,956	5,035	0	21,748	70,477	5,500	0
WEST NORTH CENTRAL	124,291	6,357	19,671	0	31,009	53,784	6,201	7,269
Iowa	37,784	655	12,814	0	14,445	4,863	3,244	1,763
Kansas	24,422	0	2,323	0	6,747	13,029	1,149	1,174
Minnesota	11,444	2,069	2,304	0	0	5,866	1,205	0
Missouri	7,834	2,230	1,309	0	NA	NA	0	4,295
Nebraska	5,241	830	0	0	3,838	573	0	0
North Dakota	12,720	467	678	0	3,247	8,206	122	0
South Dakota	24,846	106	243	0	2,732	21,247	481	37
SOUTH ATLANTIC	470,456	18,345	28,652	58	251,152	146,689	21,969	3,591
Delaware	5,837	293	1,720	0	2,048	1,740	0	36
District of Columbia	14,399	334	0	0	4,007	9,929	129	0
Florida	154,666	4,508	2,553	0	99,182	46,705	1,718	0
Georgia	39,395	1,958	3,443	0	29,498	272	3,657	567
Maryland	93,777	5,109	17,403	58	34,033	32,563	4,231	320
North Carolina	52,399	1,408	2,716	0	16,922	24,291	7,062	0
South Carolina	56,206	1,748	687	0	30,610	16,316	4,177	2,668
Virginia	50,370	2,157	130	0	32,215	14,873	995	0
West Virginia	3,407	830	0	0	2,577	0	0	0
EAST SOUTH CENTRAL	84,657	7,232	1,035	0	38,068	36,856	1,466	0
Alabama	56,646	2,878	135	0	29,016	24,817	0	0
Kentucky	6,884	1,757	364	0	0	4,698	65	0
Mississippi	10,038	674	0	0	9,052	312	0	0
Tennessee	11,089	1,923	536	0	0	7,229	1,401	0
WEST SOUTH CENTRAL	83,748	12,423	6,494	9,933	42,706	7,757	617	3,818
Arkansas	2,145	1,594	0	0	551	0	0	0
Louisiana	12,834	1,304	0	0	11,530	0	0	0
Oklahoma	41,737	2,807	807	0	30,625	5,970	280	1,248
Texas	27,032	6,718	5,687	9,933	0	1,787	337	2,570
MOUNTAIN	203,389	4,145	9,801	0	87,880	91,793	4,655	5,115
Arizona	21,989	2,041	3,898	0	8,137	5,914	1,999	0
Colorado	31,606	811	0	0	17,258	13,737	0	0
Idaho	42,088	356	916	0	15,087	24,910	819	0
Montana	32,517	0	2,045	0	6,606	23,866	NA	0
Nevada	30,590	0	0	0	14,818	10,657	0	5,115
New Mexico	25,226	714	978	0	20,744	2,372	418	0
Utah	10,077	423	1,964	0	3,681	2,590	1,419	0
Wyoming	9,296	0	0	0	1,549	7,747	0	0
PACIFIC	125,349	1,891	12,623	6	51,158	57,920	1,703	48
Alaska	8,456	92	1,290	0	6,734	7	295	38
California	25,551	1,314	8,938	6	13,311	1,547	435	0
Hawaii	0	0	0	0	0	0	0	0
Oregon	57,626	145	1,196	0	21,965	34,320	0	0
Washington	33,716	340	1,199	0	9,148	22,046	973	10
TERRITORIES	4,938	356	0	0	0	60	0	4,522
Guam	8	8	0	0	0	0	0	0
Puerto Rico	4,870	348	0	0	0	0	0	4,522
Virgin Islands	60	0	0	0	0	60	0	0

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

**FIGURE 5.
NUMBER OF RABIES CASES IN ANIMALS,
FISCAL YEAR 1988**



Source: The Centers for Disease Control, as reported by the state and territorial public health laboratories.

TABLE 14. VIROLOGY-Rabies Specimens

Lab & Region	Number of Specimens	Type of procedure				
		Stained Smear	FRA	Animal Inoculation	RFFIT	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)
TOTAL	66,825	12	48	26	3	
AVERAGE	1,418					
NEW ENGLAND	1,578					
Connecticut	360		X			
Massachusetts	625		X			
Maine	179		X			
New Hampshire	269		X			
Rhode Island	50		X	X		
Vermont	95		X			
MIDDLE ATLANTIC	3,933					
New Jersey	1,967		X	X		
New York*						
Pennsylvania	1,966		X			
EAST NORTH CENTRAL	10,365					
Illinois	1,708		X			
Indiana	2,132	X	X			
Michigan	1,966	X		X		
Ohio	2,603	X	X			
Wisconsin	1,956		X	X	X	
WEST NORTH CENTRAL	6,357					
Iowa	655		X	X		
Kansas	0					
Minnesota	2,069		X			
Missouri	2,230	X	X	X		
Nebraska	830		X			
North Dakota	487		X			
South Dakota	106		X			
SOUTH ATLANTIC	18,345					
Delaware	293		X	X		
District of Columbia	334	X	X			
Florida	4,508		X			
Georgia	1,959		X	X		
Maryland	5,109		X	X	X	
North Carolina	1,408		X	X		
South Carolina	1,748		X	X		
Virginia	2,157	X	X	X		
West Virginia	830	X	X	X		
EAST SOUTH CENTRAL	7,232					
Alabama	2,878	X	X	X		
Kentucky	1,757	X	X	X		
Mississippi	674	X	X			
Tennessee	1,923		X	X		
WEST SOUTH CENTRAL	12,423					
Arkansas	1,594		X			
Louisiana	1,304		X	X		
Oklahoma	2,807	X	X	X		
Texas	6,718		X	X		Neuroblastoma cell culture
MOUNTAIN	4,145					
Arizona	2,041		X	X		
Colorado	611		X	X		
Idaho	356		X			
Montana	0					
Nevada	0					
New Mexico	714		X	X		
Utah	423	X	X	X		
Wyoming	0					
PACIFIC	1,891					
Alaska	92		X	X		
California	1,314		X	X	X	
Hawaii	0					
Oregon	145		X			
Washington	340		X	X		
TERRITORIES	356					
Guam	8		X			
Puerto Rico	348		X			
Virgin Islands	0					

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 15. VIROLOGY-Viral Isolation Specimens

Lab & Region	Number of Specimens	Type of specimen					Other
		Enteric	Arbo-virus Human Origin	Arbo-virus Non-human Origin	Respiratory	Exanthem	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TOTAL	114,864	35	21	14	39	35	
AVERAGE	2,940						
NEW ENGLAND	7,787						
Connecticut	4,449	X			X	X	Rotavirus; Clostridium difficile toxin
Massachusetts	1,368	X	X	X	X		CMV, Varicella-zoster virus
Maine	1,856	X			X	X	
New Hampshire	44				X		
Rhode Island	0						
Vermont	70				X		
MIDDLE ATLANTIC	9,264						
New Jersey	8,481	X	X	X	X	X	CNS (non arbovirus), STD (Chlamydia)
New York*							
Pennsylvania	783	X			X	X	
EAST NORTH CENTRAL	19,337						
Illinois	2,702	X	X		X	X	
Indiana	400	X			X	X	
Michigan	1,050	X			X	X	
Ohio	10,150	X	X	X	X	X	
Wisconsin	5,035	X			X	X	Urines, body fluids, CSF, tissues
WEST NORTH CENTRAL	19,671						
Iowa	12,814	X	X	X	X	X	Chlamydia, mycoplasma, Clostridium difficile toxin
Kansas	2,323	X	X		X	X	Urogenital, ocular, urine
Minnesota	2,304	X			X	X	
Missouri	1,309	X	X	X	X	X	
Nebraska	0						
North Dakota	678	X	X	X	X	X	CNS
South Dakota	243	X			X	X	Urine, CSF
SOUTH ATLANTIC	28,852						
Delaware	1,720	X	X	X	X	X	Genital
District of Columbia	0						
Florida	2,553	X	X	X	X	X	
Georgia	3,443	X			X	X	Cytomegalovirus
Maryland	17,403	X	X		X	X	
North Carolina	2,718	X	X	X	X	X	Genital specimens(HSV), body tissue & fluids
South Carolina	687	X			X	X	Ocular CMV
Virginia	130	X			X	X	Autopsy
West Virginia	0						
EAST SOUTH CENTRAL	1,035						
Alabama	135				X		
Kentucky	364	X	X		X	X	Autopsy material
Mississippi	0						
Tennessee	536	X			X	X	
WEST SOUTH CENTRAL	6,494						
Arkansas	0						
Louisiana	0						
Oklahoma	807	X	X		X	X	Spinal fluid, autopsy, genital lesion
Texas	5,687	X	X	X	X	X	CMV
MOUNTAIN	9,801						
Arizona	3,898	X	X	X	X	X	
Colorado	0						
Idaho	916				X	X	
Montana	2,045	X	X		X	X	
Nevada	0						
New Mexico	978	X	X	X	X	X	
Utah	1,964	X	X		X	X	Autopsy tissue, urines, Meningitis/Encephalitis
Wyoming	0						
PACIFIC	12,823						
Alaska	1,290	X			X	X	CNS
California	8,938	X	X	X	X	X	Urines, CSF, autopsy, genital swabs, bloods for HIV, isolates for ID
Hawaii	0						
Oregon	1,198	X			X	X	
Washington	1,199	X	X	X	X	X	
TERRITORIES	0						
Guam	0						
Puerto Rico	0						
Virgin Islands	0						

* New York did not report for fiscal year 1988.
NOTE: NA = Data not available.

TABLE 15. VIROLOGY-Viral Isolation Specimens (continued)

Lab & Region	Number of Specimens	Type of procedure									
		Tissue Culture Hosts	Eggs	Animal Hosts	HA/HI	CF	Neutralization	FA-Orig. Spec.	FA-Other	HAD/HADI	Other
(1)	(2)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
TOTAL	114,664	37	37	24	20	37	19	33	26	33	
AVERAGE	2,940										
NEW ENGLAND	7,787										
Connecticut	4,449	X			X	X	X	X	X	X	EIA
Massachusetts	1,368	X			X		X		X	X	
Maine	1,856	X	X		X				X	X	
New Hampshire	44	X			X				X		
Rhode Island	0										
Vermont	70		X		X		X		X		
MIDDLE ATLANTIC	9,264										
New Jersey	8,481	X	X	X	X	X	X	X	X	X	Interference & interference inhibition
New York*											
Pennsylvania	783	X	X		X		X	X	X	X	
EAST NORTH CENTRAL	19,337										
Illinois	2,702	X			X		X	X		X	Latex agglutination
Indiana	400	X	X		X	X	X		X	X	
Michigan	1,050	X	X		X		X		X	X	
Ohio	10,150	X			X		X	X	X	X	
Wisconsin	5,035	X	X	X	X	X	X	X	X	X	EIA
WEST NORTH CENTRAL	19,671										
Iowa	12,814	X	X	X	X	X	X		X	X	Enzyme immunoassay
Kansas	2,323	X	X					X			
Minnesota	2,304	X			X		X	X	X	X	
Missouri	1,309	X	X	X	X	X	X	X	X	X	
Nebraska	0										
North Dakota	678	X			X	X	X	X	X	X	
South Dakota	243	X	X	X	X	X	X		X	X	
SOUTH ATLANTIC	28,652										
Delaware	1,720	X	X	X	X	X		X	X		
District of Columbia	0										
Florida	2,553	X	X	X	X	X	X	X	X	X	
Georgia	3,443	X	X		X		X	X	X	X	Electron microscopy (EM), immune EM
Maryland	17,403	X	X	X	X		X	X	X	X	
North Carolina	2,716	X	X	X	X	X	X	X	X	X	Ag. detection - Rotavirus
South Carolina	687	X	X	X	X	X	X	X	X	X	
Virginia	130	X	X	X	X		X	X	X	X	
West Virginia	0										
EAST SOUTH CENTRAL	1,035										
Alabama	135										
Kentucky	364	X			X	X	X		X		
Mississippi	0										
Tennessee	536	X	X	X	X		X			X	
WEST SOUTH CENTRAL	6,494										
Arkansas	0										
Louisiana	0										
Oklahoma	807	X	X	X	X		X			X	
Texas	5,687	X	X	X	X	X	X	X	X	X	Electron microscopy
MOUNTAIN	9,801										
Arizona	3,898	X		X	X	X	X	X	X	X	
Colorado	0										
Idaho	916	X			X	X			X	X	
Montana	2,045	X			X		X	X	X		
Nevada	0										
New Mexico	978	X		X	X	X	X	X	X	X	
Utah	1,964	X		X	X		X	X	X	X	Immuno peroxidase
Wyoming	0										
PACIFIC	12,623										
Alaska	1,290	X	X	X	X	X	X	X	X	X	
California	8,938	X		X	X		X	X	X	X	EIA
Hawaii	0										
Oregon	1,196	X	X		X	X	X	X			
Washington	1,199	X	X	X	X		X	X	X	X	
TERRITORIES	0										
Guam	0										
Puerto Rico	0										
Virgin Islands	0										

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 16. VIROLOGY-Rickettsial Identification Specimens

Lab & Region	Number of Specimens	Type of specimen		Type of procedure		
		Tick	Other	Tissue Culture	FA	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)
TOTAL	15,689	5		1	5	
AVERAGE	3,138					
NEW ENGLAND	0					
Connecticut	0					
Massachusetts	0					
Maine	0					
New Hampshire	0					
Rhode Island	0					
Vermont	0					
MIDDLE ATLANTIC	9					
New Jersey	9	X			X	
New York*						
Pennsylvania	0					
EAST NORTH CENTRAL	5,683					
Illinois	0					
Indiana	0					
Michigan	0					
Ohio	5,683	X			X	
Wisconsin	0					
WEST NORTH CENTRAL	0					
Iowa	0					
Kansas	0					
Minnesota	0					
Missouri	0					
Nebraska	0					
North Dakota	0					
South Dakota	0					
SOUTH ATLANTIC	58					
Delaware	0					
District of Columbia	0					
Florida	0					
Georgia	0					
Maryland	58	X	Skin biopsy, serum		X	
North Carolina	0					
South Carolina	0					
Virginia	0					
West Virginia	0					
EAST SOUTH CENTRAL	0					
Alabama	0					
Kentucky	0					
Mississippi	0					
Tennessee	0					
WEST SOUTH CENTRAL	9,933					
Arkansas	0					
Louisiana	0					
Oklahoma	0					
Texas	9,933	X	Whole blood tissue		X	Animal inoculation
MOUNTAIN	0					
Arizona	0					
Colorado	0					
Idaho	0					
Montana	0					
Nevada	0					
New Mexico	0					
Utah	0					
Wyoming	0					
PACIFIC	6					
Alaska	0					
California	6	X	Heart valve	X	X	Electron microscopy
Hawaii	0					
Oregon	0					
Washington	0					
TERRITORIES	0					
Guam	0					
Puerto Rico	0					
Virgin Islands	0					

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 17. VIROLOGY-HIV Specimens

Lab & Region	Number of Specimens	Type of procedure				
		EIA	IFA	Western Blot	Culture	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)
TOTAL	659,579	43	23	37	4	
AVERAGE	14,990					
NEW ENGLAND	43,929					
Connecticut	8,020	X	X	X		
Massachusetts	10,360	X	X	X		
Maine	7,308	X	X	X		
New Hampshire	7,601	X	X	X		
Rhode Island	10,598	X	X	X		
Vermont	42	X		X		
MIDDLE ATLANTIC	30,128					
New Jersey	29,224	X	X	X		
New York*						
Pennsylvania	904			X		
EAST NORTH CENTRAL	83,549					
Illinois	12,100					
Indiana	12,980	X		X		
Michigan	36,293	X	X	X	X	
Ohio	428	X		X		
Wisconsin	21,748	X	X	X		p24 antigen EIA
WEST NORTH CENTRAL	31,009					
Iowa	14,445	X	X	X	X	Antigen detection
Kansas	6,747	X	X			
Minnesota	0					
Missouri	NA	X		X		
Nebraska	3,838	X				
North Dakota	3,247	X	X			
South Dakota	2,732	X				
SOUTH ATLANTIC	251,152					
Delaware	2,048	X		X		
District of Columbia	4,007	X		X		
Florida	99,182	X	X	X		
Georgia	29,498	X		X		
Maryland	34,093	X	X	X	X	
North Carolina	18,922	X		X		
South Carolina	30,610	X	X	X		
Virginia	32,215	X		X		
West Virginia	2,577	X		X		
EAST SOUTH CENTRAL	38,068					
Alabama	29,016	X		X		
Kentucky	0					
Mississippi	9,052	X	X	X		p24 Antigen
Tennessee	0					
WEST SOUTH CENTRAL	42,706					
Arkansas	551	X	X	X		
Louisiana	11,530	X		X		
Oklahoma	30,625	X		X		
Texas	0					
MOUNTAIN	87,880					
Arizona	8,137	X		X		
Colorado	17,258	X	X	X		
Idaho	15,087	X	X			
Montana	6,606	X		X		
Nevada	14,818	X		X		
New Mexico	20,744	X	X	X		
Utah	3,881	X		X		
Wyoming	1,549	X		X		
PACIFIC	51,158					
Alaska	6,734	X	X			
California	13,311	X	X	X	X	RIPA
Hawaii	0					
Oregon	21,965	X	X			
Washington	9,148	X	X	X		
TERRITORIES	0					
Guam	0					
Puerto Rico	0					
Virgin Islands	0					

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 17. VIROLOGY-HIV Specimens (continued)

Lab & Region	Source of reagent								
	Abbott (8)	Du Pont (9)	Electronuclonics (10)	Epitope (11)	Genetic Systems (12)	Protostat (13)	Ortho (14)	Organon-Teknika (15)	Other (16)
NEW ENGLAND									
Connecticut	E	W		W	E				I-Cellular Products
Massachusetts								E	I,W - in house
Maine	E		I	W					
New Hampshire		E		W					I-Cellular Products
Rhode Island	E								I - Massachusetts State Lab IFA slides, W - Biorad
Vermont	E			W					I - TAGO, Massachusetts State Lab; W - Bio Rad conj.
MID-ATLANTIC									
New Jersey					E				I,W - in house
New York*									
Pennsylvania		W							
EAST NORTH CENTRAL									
Illinois		E		W				E	W - in house
Indiana	E	W							
Michigan					E			W	I,W - in house
Ohio	E				E			W	
Wisconsin	E,O	W,O						W	W-in house; I-California State Health Dept.
WEST NORTH CENTRAL									
Iowa		E,W						I,W	
Kansas		E							I - California State Health Dept.
Minnesota									
Missouri		W		W				E	W - Bio Rad
Nebraska	E							E	
North Dakota	E		I						
South Dakota	E								
SOUTH ATLANTIC									
Delaware		E						W	
District of Columbia	E	W							
Florida	E	W			E				I- Cellular Products; I- Virion; W- Biorad; W- Mini blot
Georgia							E		W - Biotech
Maryland		E		W		E			I - in house; W - Bio Rad
North Carolina	E			W					
South Carolina	E		I					W	W - South Carolina public health laboratory
Virginia	E	W			E				
West Virginia	E					W			W-Biorad
EAST SOUTH CENTRAL									
Alabama	E			W					W-Biorad
Kentucky									
Mississippi	E,Antigen		I	W					W-Biorad
Tennessee									
WEST SOUTH CENTRAL									
Arkansas	E							W	I - California
Louisiana		W			E				W - in house
Oklahoma							E		W - in house
Texas									
MOUNTAIN									
Arizona	E	E							W - in house
Colorado	E				E,W				I- California State Health Dept.; W- CDH
Idaho					E				I - California
Montana	E	E,W							W - in house
Nevada	E								W - UC Davis in house procedure
New Mexico		W			E				I - California; W - Immunetics
Utah		E,W						W	W - Bio Rad
Wyoming	E	W							
PACIFIC									
Alaska	E				E				I - Cellular Products
California		E			E			E	W - Bio Rad conjugate, Dupont Antigen; I,O - in house
Hawaii									
Oregon					E				I - Virion
Washington		E		W	E				
TERRITORIES									
Guam									
Puerto Rico									
Virgin Islands									

Procedures: E=EIA, I=IFA, W=Western Blot.

* New York did not report for fiscal year 1988.

TABLE 18. VIROLOGY-Chlamydia Specimens

Lab & Region	Number of Specimens	Number of Positive Specimens	Type of procedure				
			Tissue Culture	Direct Specimen	EIA	IFA	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TOTAL	504,351	45,000	17	18	25	13	
AVERAGE	11,729	1,184					
NEW ENGLAND	17,737	1,922					
Connecticut	0	0					
Massachusetts	4,015	435			X		
Maine	7,892	839			X	X	
New Hampshire	4,087	352		X	X	X	
Rhode Island	1,743	296			X		
Vermont	0	0					
MIDDLE ATLANTIC	1,485	25					
New Jersey	1,485	25	X				
New York*							
Pennsylvania	0	0					
EAST NORTH CENTRAL	90,270	8,232					
Illinois	1,702	161				X	
Indiana	9,067	1,070			X		
Michigan	8,875	384	X				
Ohio	149	4	X	X		X	Iodine stain
Wisconsin	70,477	8,613	X		X	X	
WEST NORTH CENTRAL	53,784	5,656					
Iowa	4,863	259	X				
Kansas	13,029	1,299	X				
Minnesota	5,866	772			X		
Missouri	NA	NA			X		
Nebraska	573	573		X			
North Dakota	8,206	507	X	X		X	DFA syva microtrak
South Dakota	21,247	2,245			X		
SOUTH ATLANTIC	146,689	12,571					
Delaware	1,740	NA	X	X			
District of Columbia	9,929	1,394		X	X		
Florida	46,705	NA			X		
Georgia	272	50	X		X		
Maryland	32,563	3,453	X	X	X		RNA-DNA probe
North Carolina	24,291	2,736	X		X		
South Carolina	16,316	2,652			X		Culture
Virginia	14,873	2,286			X		
West Virginia	0						
EAST SOUTH CENTRAL	36,856	4,792					
Alabama	24,617	3,435			X		
Kentucky	4,698	467			X		
Mississippi	312	NA		X	X		
Tennessee	7,229	890			X		
WEST SOUTH CENTRAL	7,757	1,005					
Arkansas	0	0					
Louisiana	0	0					
Oklahoma	5,970	792		X		X	
Texas	1,787	213	X		X	X	
MOUNTAIN	91,793	5,568					
Arizona	5,914	676	X		X	X	
Colorado	13,737	1,039		X	X	X	
Idaho	24,910	2,422		X			
Montana	23,866	NA	X	X		X	
Nevada	10,657	NA		X	X		
New Mexico	2,372	238		X			
Utah	2,590	263	X	X			
Wyoming	7,747	930		X	X		
PACIFIC	57,920	5,220					
Alaska	7	2	X			X	
California	1,547	81	X				
Hawaii	0	0					
Oregon	34,320	3,041				X	
Washington	22,046	2,096		X			
TERRITORIES	60	10					
Guam	0	0					
Puerto Rico	0	0					
Virgin Islands	60	10		X			

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 18. VIROLOGY-Chlamydia Specimens (continued)

Lab & Region	Special Transport Medium (9)	Type of transportation procedure			
		Frozen during Shipment (11)	Refrigerated during Shipment (12)	Mailed without Refrigeration (13)	Other (14)
No. of States		5	15	24	
NEW ENGLAND					
Connecticut					
Massachusetts				X	
Maine	Chlamydiazyme (Abbott)			X	
New Hampshire				X	
Rhode Island	Abbott transport media				
Vermont					
MID-ATLANTIC					
New Jersey	2 SP		X		
New York*					
Pennsylvania					
EAST NORTH CENTRAL					
Illinois				X	
Indiana	Abbott EIA & commercial transport media		X	X	
Michigan	2 SP			X	Hand delivered
Ohio	2 sucrose phosphate	X	X		
Wisconsin	0.2 M sucrose phosphate		X	X	
WEST NORTH CENTRAL					
Iowa	2 SP		X		
Kansas	Chlamydia transwab	X			
Minnesota	Abbott				
Missouri				X	
Nebraska					Syva slide collection kit
North Dakota	Marion Scientific			X	Syva Microtrak
South Dakota				X	
SOUTH ATLANTIC					
Delaware					
District of Columbia	Abbott transport medium				
Florida	Abbott				
Georgia	Abbott Chlamydiazyme "specimen storage reagent"		X	X	
Maryland	2 SP medium		X		
North Carolina	3 SP		X		Swab without refrigeration
South Carolina	2SP for culture, EIA - Abbott		X		
Virginia				X	
West Virginia					
EAST SOUTH CENTRAL					
Alabama	STD sample collection & transport kit			X	
Kentucky	Abbott STD sample collection & transport kits		X		
Mississippi	Abbott Chlamydiazyme			X	
Tennessee				X	
WEST SOUTH CENTRAL					
Arkansas					
Louisiana					
Oklahoma				X	
Texas	2 SP	X	X		Hand delivered - no refrigeration
MOUNTAIN					
Arizona	2 SP		X		EIA - Chlamydiazyme transport
Colorado				X	
Idaho				X	
Montana	Chlamydia transport		X		
Nevada				X	
New Mexico				X	
Utah	2 SP	X	X	X	
Wyoming				X	
PACIFIC					
Alaska		X			
California	Eagles' MEM in Earle's BCS with 10% FBS		X		
Hawaii					
Oregon				X	
Washington				X	
TERRITORIES					
Guam					
Puerto Rico					
Virgin Islands					

* New York did not report for fiscal year 1988.

TABLE 19. VIROLOGY-Herpes Simplex Specimens

Lab & Region	Number of Specimens	Number of Positive Specimens	Type of procedure	
			Cell Culture	Other
(1)	(2)	(3)	(4)	(5)
TOTAL	60,564	16,815	35	
AVERAGE	1,781	495		
NEW ENGLAND	9,882	2,326		
Connecticut	7,842	1,797	X	
Massachusetts	314	104	X	
Maine	1,228	269	X	
New Hampshire	498	156	X	Culture amplified direct EIA, FA
Rhode Island	0	0		
Vermont	0	0		
MIDDLE ATLANTIC	894	125		
New Jersey	853	107	X	Direct specimen FA
New York*				
Pennsylvania	41	18	X	FA
EAST NORTH CENTRAL	13,177	4,158		
Illinois	544	431	X	Latex agglutination, complement fixation
Indiana	609	283	X	
Michigan	2,810	823	X	Confirmation by in house ELISA
Ohio	3,714	1,151	X	
Wisconsin	5,500	1,470	X	EIA
WEST NORTH CENTRAL	6,201	2,292		
Iowa	3,244	1,144	X	
Kansas	1,149	620	X	
Minnesota	1,205	416	X	
Missouri	0	0		
Nebraska	0	0		
North Dakota	122	16	X	
South Dakota	481	96	X	FA
SOUTH ATLANTIC	21,969	4,896		
Delaware	0	0		
District of Columbia	129	90	X	FA confirmation
Florida	1,718	258	X	DFA, CF, suckling mice
Georgia	3,657	1,357	X	EIA for identification
Maryland	4,231	383	X	EIA
North Carolina	7,062	1,354	X	
South Carolina	4,177	1,254	X	Typing
Virginia	995	260	X	FA
West Virginia	0	0		
EAST SOUTH CENTRAL	1,466	541		
Alabama	0	0		
Kentucky	65	6	X	Direct FA
Mississippi	0	0		
Tennessee	1,401	535	X	Direct FA
WEST SOUTH CENTRAL	617	141		
Arkansas	0	0		
Louisiana	0	0		
Oklahoma	280	83	X	
Texas	337	58	X	FA
MOUNTAIN	4,655	1,545		
Arizona	1,999	697	X	Final identification by FA
Colorado	0	0		
Idaho	819	248	X	
Montana	NA	NA	X	
Nevada	0	0		
New Mexico	418	200	X	
Utah	1,419	400	X	
Wyoming	0	0		
PACIFIC	1,703	791		
Alaska	295	118	X	IFA
California	435	195	X	Direct immunofluorescence
Hawaii	0	0		
Oregon	0	0		
Washington	973	478	X	FA typing
TERRITORIES	0	0		
Guam	0	0		
Puerto Rico	0	0		
Virgin Islands	0	0		

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

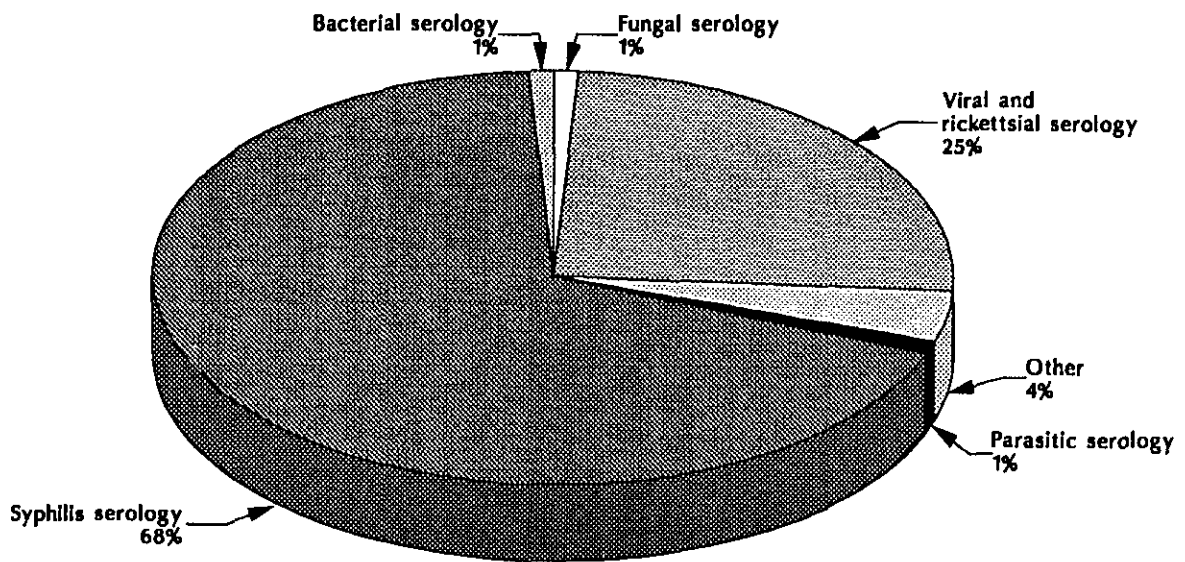
TABLE 20. VIROLOGY-Other Virology Specimens

Lab & Region	Number of Specimens	Disease/Type of procedure
(1)	(2)	(3)
TOTAL	60,356	
AVERAGE	3,550	
NEW ENGLAND	628	
Connecticut	0	
Massachusetts	0	
Maine	628	Respiratory, CNS, gastrointestinal - cell culture
New Hampshire	0	
Rhode Island	0	
Vermont	0	
MIDDLE ATLANTIC	35,299	
New Jersey	35,299	Rubella - FIAX; Hepatitis - EIA; respiratory and CNS - CF & HI
New York*		
Pennsylvania	0	
EAST NORTH CENTRAL	66	
Illinois	0	
Indiana	0	
Michigan	66	Rotavirus - rotazyme by Abbott
Ohio	NA	Influenza - tissue culture, FA, HAD, HI; Enteroviruses/Gastroenteritis, Adenoviruses - tissue culture, FA, neutralization
Wisconsin	0	
WEST NORTH CENTRAL	7,269	
Iowa	1,763	Hepatitis - EIA; Rotavirus - EIA, latex agglutination
Kansas	1,174	Enteric viruses and CMV - cell culture; Influenza - eggs, DFA, cell culture; respiratory - cell culture
Minnesota	0	
Missouri	4,295	Hepatitis - EIA
Nebraska	0	
North Dakota	0	
South Dakota	37	Rotavirus - EIA
SOUTH ATLANTIC	3,591	
Delaware	36	Rotavirus - EIA
District of Columbia	0	
Florida	0	
Georgia	567	Enteroviruses, respiratory, Cytomegalovirus - cell culture
Maryland	320	Rotavirus - EIA; CMV - IFA; Varicella-zoster - FA
North Carolina	0	
South Carolina	2,668	Hepatitis - Radioimmunoassay
Virginia	0	
West Virginia	0	
EAST SOUTH CENTRAL	0	
Alabama	0	
Kentucky	0	
Mississippi	0	
Tennessee	0	
WEST SOUTH CENTRAL	3,818	
Arkansas	0	
Louisiana	0	
Oklahoma	1,248	Meningitis, upper respiratory, diarrhea - culture
Texas	2,570	Arbovirus bird bloods - HI, EIA
MOUNTAIN	5,115	
Arizona	0	
Colorado	0	
Idaho	0	
Montana	0	
Nevada	5,115	Rubella - L.A.; Rubeola - IFA; Hepatitis B - EIA
New Mexico	0	
Utah	0	
Wyoming	0	
PACIFIC	48	
Alaska	38	Parainfluenza, Respiratory syncytial virus, ECHO virus- culture
California	0	
Hawaii	0	
Oregon	0	
Washington	10	Psittacosis - animal host
TERRITORIES	4,522	
Guam	0	
Puerto Rico	4,522	Hepatitis, Rubella - EIA
Virgin Islands	0	

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

FIGURE 6.
STATE PUBLIC HEALTH LABORATORY IMMUNOLOGY SPECIMENS,
BY CATEGORY, FISCAL YEAR 1988



TOTAL: 4.2 MILLION SPECIMENS

TABLE 21. IMMUNOLOGY SPECIMENS

Lab & Region	Total Immunology Specimens	Syphilis Serology	Bacterial Serology	Fungal Serology	Parasitic Serology	Viral and Rickettsial Serology	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TOTAL	4,195,870	2,842,558	42,812	45,254	51,994	1,057,043	156,009
AVERAGE	79,164	53,633	951	1,331	1,733	22,979	7,091
NEW ENGLAND	184,893	110,970	12,991	913	3,439	54,824	1,756
Connecticut	42,448	21,963	2,948	0	NA	17,539	0
Massachusetts	67,312	55,027	485	338	0	9,879	1,585
Maine	15,739	1,595	445	144	1,367	12,188	0
New Hampshire	6,005	3,376	136	0	22	2,471	0
Rhode Island	42,384	25,516	8,813	0	0	8,055	0
Vermont	8,890	3,493	166	23	437	4,692	79
MIDDLE ATLANTIC	168,769	109,983	67	2,185	1,732	54,802	0
New Jersey	166,751	109,324	67	2,185	1,732	53,443	0
New York*							
Pennsylvania	2,018	659	0	0	0	1,359	0
EAST NORTH CENTRAL	332,485	152,271	6,659	11,692	11,598	99,293	50,972
Illinois	67,306	35,832	43	5,965	595	20,442	4,429
Indiana	24,599	14,965	99	1,918	544	7,073	0
Michigan	59,259	49,370	4,270	1,284	3,766	0	569
Ohio	21,845	15,742	874	1,039	390	3,800	0
Wisconsin	159,476	36,362	1,373	1,466	8,303	67,978	45,974
WEST NORTH CENTRAL	261,301	127,224	5,489	7,689	4,197	114,475	2,227
Iowa	69,606	23,936	3,446	3,633	3,123	35,468	0
Kansas	32,659	29,945	110	308	0	2,296	0
Minnesota	35,545	28,252	172	1,436	1,006	2,515	2,164
Missouri	75,920	24,134	1,580	2,278	0	47,885	63
Nebraska	11,964	6,726	5	0	0	5,233	0
North Dakota	22,519	9,092	52	12	62	13,301	0
South Dakota	13,088	5,139	124	22	6	7,797	0
SOUTH ATLANTIC	1,806,802	1,298,147	11,114	5,644	22,189	417,584	52,124
Delaware	20,782	18,176	229	0	0	1,309	1,069
District of Columbia	78,258	72,204	0	0	141	0	5,913
Florida	700,696	526,825	574	0	558	172,741	0
Georgia	313,230	259,295	95	257	838	8,944	43,801
Maryland	308,232	142,000	5,087	3,418	16,994	138,063	670
North Carolina	174,880	119,950	2,917	849	2,653	48,511	0
South Carolina	73,260	58,559	278	633	789	12,329	672
Virginia	110,428	86,859	1,934	479	218	20,938	0
West Virginia	29,036	14,279	0	8	0	14,749	0
EAST SOUTH CENTRAL	619,565	545,706	672	2,824	1,355	47,076	21,932
Alabama	248,433	221,812	290	2,130	578	1,691	21,932
Kentucky	41,309	23,789	102	0	777	16,641	0
Mississippi	189,684	189,665	7	12	0	0	0
Tennessee	140,139	110,440	273	682	0	28,744	0
WEST SOUTH CENTRAL	390,284	205,861	3,703	6,425	5,635	168,355	305
Arkansas	83,850	78,093	937	3,743	9	1,068	0
Louisiana	75,848	38,743	513	581	1,780	34,231	0
Oklahoma	77,963	39,251	205	0	0	38,202	305
Texas	152,623	49,774	2,048	2,101	3,846	94,854	0
MOUNTAIN	164,161	117,751	368	3,469	269	29,045	13,261
Arizona	40,877	14,609	13	3,403	219	22,633	0
Colorado	26,546	23,271	44	0	0	616	2,615
Idaho	3,522	3,117	85	16	0	304	0
Montana	5,847	5,727	120	0	0	NA	0
Nevada	19,050	19,050	0	0	0	0	0
New Mexico	46,595	39,000	100	50	50	1,078	6,319
Utah	13,757	9,426	4	0	0	0	4,327
Wyoming	7,967	3,551	0	0	0	4,416	0
PACIFIC	166,347	88,050	1,733	4,338	1,580	58,656	11,990
Alaska	38,419	16,819	10	0	59	21,531	0
California	47,438	13,851	1,426	4,264	1,521	26,378	0
Hawaii	1,120	1,003	117	0	0	0	0
Oregon	49,077	36,861	180	74	0	1	11,961
Washington	30,293	19,516	0	0	0	10,748	29
TERRITORIES	101,063	86,595	18	75	0	12,933	1,442
Guam	4,294	2,266	0	0	0	640	1,388
Puerto Rico	83,876	74,099	0	0	0	9,777	0
Virgin Islands	12,893	10,230	18	75	0	2,516	54

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 22. IMMUNOLOGY-Syphilis Serology Specimens

Lab & Region (1)	Number of Specimens (2)	Type of procedure										
		VDRL (3)	RPR (4)	ART (5)	USR (6)	RST (7)	FTA-ABS (8)	FTA-ABS (IgM) (9)	DFATP (10)	MHA-TP (11)	Dark-field (12)	Other (13)
TOTAL	2,842,558	49	35	2	5	2	48	4	9	22	9	
AVERAGE	53,633											
NEW ENGLAND	110,970											
Connecticut	21,963	X	X	X		X	X		X		X	
Massachusetts	55,027	X					X			X		
Maine	1,595	X	X				X					
New Hampshire	3,376	X	X				X		X			
Rhode Island	25,516	X	X				X					
Vermont	3,493	X	X				X		X		X	
MIDDLE ATLANTIC	109,983											
New Jersey	109,324	X	X				X					HATTS
New York*												
Pennsylvania	659	X	X				X					
EAST NORTH CENTRAL	152,271											
Illinois	35,832	X	X				X			X		
Indiana	14,965	X	X				X					
Michigan	49,370				X		X		X			HATTS
Ohio	15,742	X					X					
Wisconsin	38,362	X					X	X		X	X	
WEST NORTH CENTRAL	127,224											
Iowa	23,936	X					X	X	X			
Kansas	29,945	X					X					
Minnesota	28,252	X			X		X		X		X	
Missouri	24,134	X	X				X			X		
Nebraska	6,726		X							X		
North Dakota	9,092	X			X	X						
South Dakota	5,139	X	X							X		
SOUTH ATLANTIC	1,298,147											
Delaware	18,178	X	X				X				X	HATTS
District of Columbia	72,204	X			X		X			X		
Florida	526,825	X	X				X	X		X		
Georgia	259,295	X	X				X					
Maryland	142,000	X	X				X		X			
North Carolina	119,950	X	X				X		X	X		
South Carolina	58,559	X	X				X			X		
Virginia	86,859	X	X				X			X		
West Virginia	14,279		X				X			X		
EAST SOUTH CENTRAL	545,706											
Alabama	221,812	X	X				X			X		
Kentucky	23,789	X	X				X					
Mississippi	189,665	X	X				X					
Tennessee	110,440		X				X			X		
WEST SOUTH CENTRAL	205,861											
Arkansas	78,093	X					X		X	X		
Louisiana	38,743	X					X			X		
Oklahoma	39,251	X	X				X					
Texas	49,774	X	X				X			X		
MOUNTAIN	117,751											
Arizona	14,609	X					X			X		
Colorado	23,271	X					X					
Idaho	3,117	X			X		X					
Montana	5,727	X					X					
Nevada	19,050	X	X				X			X		
New Mexico	39,000	X	X									HATTS
Utah	9,426	X	X				X					
Wyoming	3,551	X					X					
PACIFIC	88,050											
Alaska	16,819	X	X				X					
California	13,851	X	X				X	X		X	X	
Hawaii	1,003	X	X								X	
Oregon	36,861	X	X				X					
Washington	19,516	X	X				X			X		
TERRITORIES	86,595											
Guam	2,266	X					X				X	
Puerto Rico	74,099	X	X							X	X	
Virgin Islands	10,230	X		X								

* New York did not report for fiscal year 1988.
NOTE: NA = Data not available.

TABLE 23. IMMUNOLOGY-Bacterial Serology Specimens

Lab & Region	Number of Specimens	Type of specimen						Other
		Brucellosis	Tularemia	Strept. Antibodies	Leptospirosis	Salmonellosis		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
TOTAL	42,812	37	35	6	16	9		
AVERAGE	951							
NEW ENGLAND	12,991							
Connecticut	2,946	X	X		X	X	Lyme disease	
Massachusetts	485	X	X				Legionnaire's disease	
Maine	445						Legionella	
New Hampshire	136						Legionella-direct & indirect FA; Lyme disease	
Rhode Island	8,813	X				X	Lyme disease	
Vermont	166	X	X				Legionellosis	
MIDDLE ATLANTIC	67							
New Jersey	67	X	X		X			
New York*								
Pennsylvania	0							
EAST NORTH CENTRAL	6,659							
Illinois	43	X	X				Legionella	
Indiana	99	X	X		X			
Michigan	4,270						Legionellosis	
Ohio	874				X		Legionella	
Wisconsin	1,373	X	X	X		X		
WEST NORTH CENTRAL	5,489							
Iowa	3,446	X	X		X		Borrelia	
Kansas	110	X	X				Legionellosis	
Minnesota	172	X	X				Weil-Felix heterophile antibody	
Missouri	1,580	X	X		X		Legionnaires	
Nebraska	5	X	X					
North Dakota	52	X	X	X		X	Weil Felix	
South Dakota	124	X	X				Legionella	
SOUTH ATLANTIC	11,114							
Delaware	229					X		
District of Columbia	0							
Florida	574				X		Legionella	
Georgia	95	X	X				Legionella	
Maryland	5,087	X	X	X	X	X	Legionella, Lyme disease, DPT	
North Carolina	2,917	X	X					
South Carolina	278	X	X		X		Legionellosis, Listeria	
Virginia	1,934	X	X	X	X		Legionella	
West Virginia	0							
EAST SOUTH CENTRAL	672							
Alabama	290						Legionellosis	
Kentucky	102	X	X			X	Legionnaires IFA	
Mississippi	7	X	X	X				
Tennessee	273	X	X				Legionnaire's disease	
WEST SOUTH CENTRAL	3,703							
Arkansas	937	X	X		X	X		
Louisiana	513	X	X		X		Legionella	
Oklahoma	205	X	X					
Texas	2,048	X	X		X			
MOUNTAIN	366							
Arizona	13	X	X					
Colorado	44	X	X				Heterophile, Febrile	
Idaho	85	X	X					
Montana	120	X	X					
Nevada	0							
New Mexico	100	X	X				Legionella, plague	
Utah	4	X	X					
Wyoming	0							
PACIFIC	1,733							
Alaska	10	X	X					
California	1,426	X	X	X	X	X	Legionellosis, Pertussis, Yersinia pseudotuberculosis, Yersinia enterocolitica	
Hawaii	117				X			
Oregon	180	X	X		X			
Washington	0							
TERRITORIES	18							
Guam	0							
Puerto Rico	0							
Virgin Islands	18	X						

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 24. IMMUNOLOGY-Fungal Serology Specimens

Lab & Region	Number of Specimens	Type of specimen						
		Blastomycosis	Coccidioidomycosis	Histoplasmosis	Cryptococcosis	Aspergillosis	Candidiasis	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
TOTAL	44,844	27	29	30	19	21	6	
AVERAGE	1,359							
NEW ENGLAND	503							
Connecticut	0							
Massachusetts	336				X	X		
Maine	144				X	X		
New Hampshire	0							
Rhode Island	0							
Vermont	23		X	X				
MIDDLE ATLANTIC	2,185							
New Jersey	2,185	X	X	X	X	X	X	
New York*								
Pennsylvania	0							
EAST NORTH CENTRAL	11,692							
Illinois	5,985	X	X	X		X		
Indiana	1,918	X	X	X	X	X	X	
Michigan	1,284	X	X	X				
Ohio	1,039	X	X	X	X	X		
Wisconsin	1,486	X	X	X	X			
WEST NORTH CENTRAL	7,689							
Iowa	3,633	X	X	X	X	X		
Kansas	308		X	X				
Minnesota	1,436	X	X	X	X	X	X	Farmer's lung
Missouri	2,278	X	X	X	X	X		
Nebraska	0							
North Dakota	12	X	X	X		X		
South Dakota	22	X	X	X	X	X		
SOUTH ATLANTIC	5,644							
Delaware	0							
District of Columbia	0							
Florida	0							
Georgia	257	X	X	X				
Maryland	3,418	X	X	X	X	X	X	
North Carolina	849	X	X	X	X	X		
South Carolina	633	X	X	X	X	X	X	Sporotrichosis
Virginia	479	X	X	X	X			
West Virginia	8	X	X	X		X		
EAST SOUTH CENTRAL	2,824							
Alabama	2,130	X	X	X		X		
Kentucky	0							
Mississippi	12	X	X	X				
Tennessee	682	X		X				
WEST SOUTH CENTRAL	6,425							
Arkansas	3,743	X	X	X	X	X		
Louisiana	581	X	X	X	X	X	X	
Oklahoma	0							
Texas	2,101	X	X	X	X	X		
MOUNTAIN	3,469							
Arizona	3,403		X					
Colorado	0							
Idaho	16	X	X	X		X		
Montana	0							
Nevada	0							
New Mexico	50	X	X	X	X	X		
Utah	0							
Wyoming	0							
PACIFIC	4,338							
Alaska	0							
California	4,264	X	X	X	X			
Hawaii	0							
Oregon	74	X	X	X				
Washington	0							
TERRITORIES	75							
Guam	0							
Puerto Rico	0							
Virgin Islands	75			X				

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 25. IMMUNOLOGY-Parasitic Serology Specimens

Lab & Region	Number of Specimens	Type of specimen				
		Trichinosis	Toxoplasmosis	Amebiasis	Echinococcosis	Trypanosomiasis
(1)	(2)	(3)	(4)	(5)	(6)	(7)
TOTAL	50,381	8	30	11	2	1
AVERAGE	1,737					
NEW ENGLAND	1,828					
Connecticut	NA		X			
Massachusetts	0					
Maine	1,367		X			
New Hampshire	22		X			
Rhode Island	0					
Vermont	437		X			
MIDDLE ATLANTIC	1,732					
New Jersey	1,732	X	X	X		
New York*						
Pennsylvania	0					
EAST NORTH CENTRAL	11,598					
Illinois	595		X			
Indiana	544	X	X	X		
Michigan	3,768		X			
Ohio	390		X	X		
Wisconsin	6,303		X			
WEST NORTH CENTRAL	4,197					
Iowa	3,123	X	X	X		
Kansas	0					
Minnesota	1,006	X	X			
Missouri	0					
Nebraska	0					
North Dakota	62		X			
South Dakota	6		X			
SOUTH ATLANTIC	22,189					
Delaware	0					
District of Columbia	141		X			
Florida	558		X			
Georgia	838		X			
Maryland	18,994	X	X	X	X	
North Carolina	2,653		X	X		
South Carolina	789		X	X		
Virginia	218	X	X			
West Virginia	0					
EAST SOUTH CENTRAL	1,355					
Alabama	578		X			
Kentucky	777		X			
Mississippi	0					
Tennessee	0					
WEST SOUTH CENTRAL	5,635					
Arkansas	9	X	X	X	X	X
Louisiana	1,780		X	X		
Oklahoma	0					
Texas	3,846		X	X		
MOUNTAIN	269					
Arizona	219		X			
Colorado	0					
Idaho	0					
Montana	0					
Nevada	0					
New Mexico	50		X			
Utah	0					
Wyoming	0					
PACIFIC	1,580					
Alaska	59		X			
California	1,521	X	X	X		
Hawaii	0					
Oregon	0					
Washington	0					
TERRITORIES	0					
Guam	0					
Puerto Rico	0					
Virgin Islands	0					

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 26. IMMUNOLOGY-Viral and Rickettsial Serology Specimens

Lab & Region (1)	Number of Specimens (2)	Type of specimen					
		Respiratory (3)	CNS (4)	STD (Including Herpes) (5)	Exanthem (6)	HIV (7)	Other (8)
TOTAL	1,057,043	35	34	35	35	23	
AVERAGE	22,979						
NEW ENGLAND	54,824						
Connecticut	17,539	X	X	X	X		
Massachusetts	9,879	X	X	X	X		Hepatitis delta virus, Hepatitis B virus antibody
Maine	12,188	X	X	X	X		
New Hampshire	2,471	X	X	X	X		
Rhode Island	8,055						Sera, Rubella, Rubeola, Hepatitis A & B
Vermont	4,692	X	X	X	X	X	
MIDDLE ATLANTIC	54,802						
New Jersey	53,443	X	X	X	X	X	
New York*							
Pennsylvania	1,359	X	X	X	X	X	
EAST NORTH CENTRAL	99,293						
Illinois	20,442	X	X	X	X	X	
Indiana	7,073	X	X	X	X		
Michigan	0						
Ohio	3,800	X	X	X	X	X	
Wisconsin	67,978	X	X	X	X	X	Mycoplasma cultures & serology, TWAR serology, Enteric, cardiovascular, urogenital
WEST NORTH CENTRAL	114,475						
Iowa	35,468	X	X	X	X	X	RM, CMV, VZV, Q Fever, Hepatitis, Enterovirus
Kansas	2,296						Serum
Minnesota	2,515	X	X	X	X		Transplant
Missouri	47,865						Chlamydia
Nebraska	5,233						Rubella
North Dakota	13,301	X	X	X	X	X	
South Dakota	7,797	X	X	X	X		
SOUTH ATLANTIC	417,584						
Delaware	1,309						
District of Columbia	0						
Florida	172,741	X	X	X	X	X	Hepatitis A, Hepatitis BSag, Hepatitis BC AB
Georgia	8,944	X	X	X	X		
Maryland	138,063	X	X		X		Enteric, Hepatitis, Mumps
North Carolina	48,511	X	X	X	X	X	
South Carolina	12,329	X	X	X	X		Rubella
Virginia	20,938	X	X	X	X		
West Virginia	14,749	X	X	X	X		Hepatitis
EAST SOUTH CENTRAL	47,076						
Alabama	1,891	X	X	X	X		Enteric, CMV, Spotted fever typhus
Kentucky	16,641	X	X	X	X	X	Hepatitis B surface antibody, Rubella,
Mississippi	0						
Tennessee	28,744	X	X	X	X	X	
WEST SOUTH CENTRAL	168,355						
Arkansas	1,068	X	X	X	X	X	
Louisiana	34,231	X	X	X	X	X	
Oklahoma	38,202	X	X	X	X	X	
Texas	94,854	X	X	X	X	X	Hepatitis A & B, Lyme disease
MOUNTAIN	29,045						
Arizona	22,633	X	X	X	X	X	Hepatitis
Colorado	616					X	CF-Viral diseases, Chlamydia, CTF-IFA
Idaho	304	X	X	X	X		
Montana	NA	X	X	X	X		
Nevada	0						
New Mexico	1,076	X	X	X	X		
Utah	0						
Wyoming	4,416						Rubella, Rubeola
PACIFIC	58,656						
Alaska	21,531	X	X	X	X	X	Hepatitis, Rotavirus
California	26,376						Blood, chicken sera, sera, CSF, plasma, horse sera
Hawaii	0						
Oregon	1						Mononucleosis, serum
Washington	10,748	X	X	X	X	X	
TERRITORIES	12,933						
Guam	640					X	
Puerto Rico	9,777					X	
Virgin Islands	2,516			X		X	

* New York did not report for fiscal year 1988.
NOTE: NA = Data not available.

TABLE 27. IMMUNOLOGY-Other Immunology Specimens

Lab & Region	Number of Specimens	Disease/Type of procedure
(1)	(2)	(3)
TOTAL	155,917	
AVERAGE	7,425	
NEW ENGLAND	1,684	
Connecticut	0	
Massachusetts	1,585	Babesiosis - IFA; Lyme - EIA, Western Blot
Maine	0	
New Hampshire	0	
Rhode Island	0	
Vermont	79	Hepatitis - EIA
MIDDLE ATLANTIC	0	
New Jersey	0	
New York*		
Pennsylvania	0	
EAST NORTH CENTRAL	50,972	
Illinois	4,429	Arbor-bird blood & arbor humans - H.I.
Indiana	0	
Michigan	569	Lyme disease - ELISA; Pertussis - tube agglutination, DFA
Ohio	0	
Wisconsin	45,974	Hepatitis A, B+Delta-EIA
WEST NORTH CENTRAL	2,227	
Iowa	0	
Kansas	0	
Minnesota	2,164	Rubella - EIA, IgG & IgM; Rickettsial & Lyme disease - IFA
Missouri	63	Lyme disease - IFA
Nebraska	0	
North Dakota	0	
South Dakota	0	
SOUTH ATLANTIC	52,124	
Delaware	1,068	Rubella - rubascan
District of Columbia	5,913	Hepatitis, Herpes, Rubella, CMV, Measles, Varicella-zoster virus - EIA
Florida	0	
Georgia	43,801	Rubella - latex agglutination (immunity screen only)
Maryland	670	Immunoglobulin - RID
North Carolina	0	
South Carolina	672	Lyme disease
Virginia	0	
West Virginia	0	
EAST SOUTH CENTRAL	21,932	
Alabama	21,932	Rubella- latex agglutination; Hepatitis- EIA
Kentucky	0	
Mississippi	0	
Tennessee	0	
WEST SOUTH CENTRAL	305	
Arkansas	0	
Louisiana	0	
Oklahoma	305	Ehrlichiosis - IFA
Texas	0	
MOUNTAIN	13,261	
Arizona	0	
Colorado	2,615	Hepatitis - HBSAG, anti HBS
Idaho	0	
Montana	0	
Nevada	0	
New Mexico	6,319	Rubella, Hepatitis
Utah	4,327	Rubella - latex; RMSF - IFA; Hepatitis - EIA; WEE/SLE - HI
Wyoming	0	
PACIFIC	11,990	
Alaska	0	
California	0	
Hawaii	0	
Oregon	11,981	Hepatitis A & B - A-IgM, BsAg; Rubella - latex agglutination; misc. serology - IFA & complex
Washington	29	Tularemia, Brucella - tube and slide agglutination; Proteus ox19, ox2, ox4, Leptospira - slide
TERRITORIES	1,442	
Guam	1,388	Hepatitis, Rubella - EIA
Puerto Rico	0	
Virgin Islands	54	Spinal fluid - ART

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 28. HEMATOLOGY SPECIMENS

Lab & Region (1)	Total Hematology Specimens (2)	Type of specimen		
		Hematology (3)	Immunohematology (4)	Hemoglobinopathy (5)
TOTAL	1,338,575	285,889	233,429	819,257
AVERAGE	38,245	17,868	14,589	31,510
NEW ENGLAND	10,307	138	0	10,169
Connecticut	6,831	138	0	6,693
Massachusetts	0	0	0	0
Maine	0	0	0	0
New Hampshire	0	0	0	0
Rhode Island	3,476	0	0	3,476
Vermont	0	0	0	0
MIDDLE ATLANTIC	280	280	0	0
New Jersey	0	0	0	0
New York*				
Pennsylvania	280	280	0	0
EAST NORTH CENTRAL	478	0	0	478
Illinois	0	0	0	0
Indiana	0	0	0	0
Michigan	0	0	0	0
Ohio	478	0	0	478
Wisconsin	0	0	0	0
WEST NORTH CENTRAL	58,012	6,034	1,413	48,565
Iowa	30,876	0	0	30,876
Kansas	0	0	0	0
Minnesota	0	0	0	0
Missouri	17,689	0	0	17,689
Nebraska	0	0	0	0
North Dakota	1,413	0	1,413	0
South Dakota	6,034	6,034	0	0
SOUTH ATLANTIC	705,591	206,797	114,931	383,863
Delaware	30,116	28,656	0	1,460
District of Columbia	50,378	38,292	5,218	6,868
Florida	96,595	40,488	20,800	35,307
Georgia	79,452	0	14,814	64,638
Maryland	237,576	95,508	19,462	122,606
North Carolina	84,643	2,628	15,655	66,360
South Carolina	95,870	1,225	22,589	71,856
Virginia	30,331	0	16,393	13,938
West Virginia	830	0	0	830
EAST SOUTH CENTRAL	212,292	15,078	65,587	131,627
Alabama	104,558	0	33,160	71,398
Kentucky	7,132	0	7,132	0
Mississippi	96,141	15,078	25,295	55,768
Tennessee	4,461	0	0	4,461
WEST SOUTH CENTRAL	119,478	407	47,523	71,548
Arkansas	19,892	407	8,341	11,144
Louisiana	31,348	0	2,608	28,740
Oklahoma	7,552	0	3,816	3,736
Texas	60,688	0	32,760	27,928
MOUNTAIN	171,385	7,251	0	164,114
Arizona	0	0	0	0
Colorado	163,925	0	0	163,925
Idaho	6,696	6,696	0	0
Montana	0	0	0	0
Nevada	23	0	0	23
New Mexico	168	0	0	168
Utah	0	0	0	0
Wyoming	555	555	0	0
PACIFIC	3,915	22	0	3,893
Alaska	0	0	0	0
California	22	22	0	0
Hawaii	0	0	0	0
Oregon	0	0	0	0
Washington	3,893	0	0	3,893
TERRITORIES	58,857	49,882	3,975	5,000
Guam	4,136	3,693	443	0
Puerto Rico	7,648	7,613	0	35
Virgin Islands	47,073	38,576	3,532	4,965

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

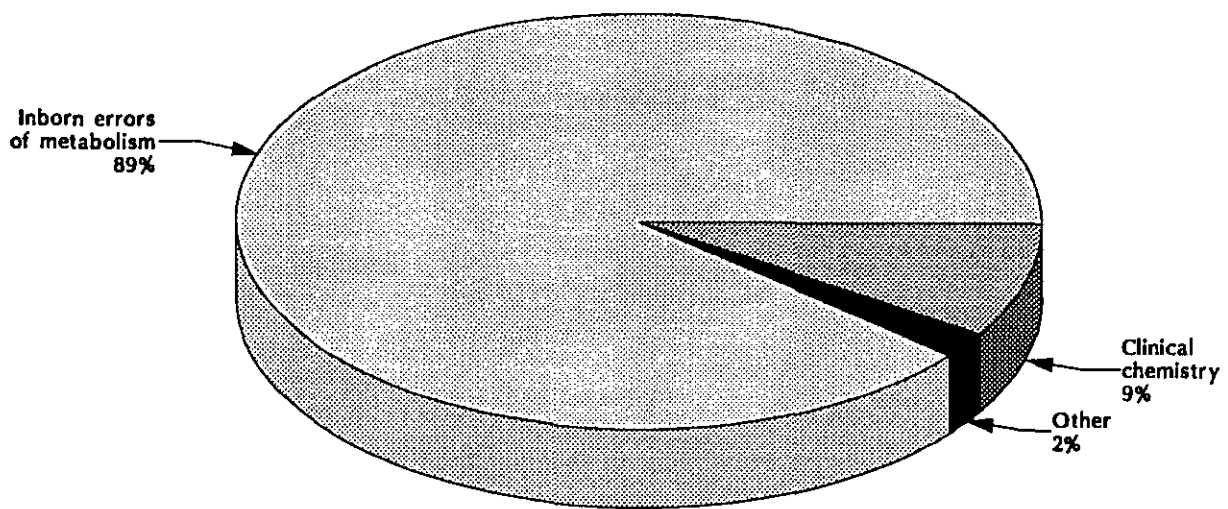
TABLE 29. HEMATOLOGY-Hemoglobinopathy Specimens

Lab & Region	Hematology Specimens	Immuno-hematology Specimens	Hemo-globinopathy Specimens	Hemoglobinopathy procedure							Other
				Hemo. Cell. Acetate Electro.	Citrate Agar Electro.	Solubility Testing	Fetal Hemo-globin Assay	Hemo-globin A2 Quant.	Densitometry	HPLC	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
TOTAL	285,889	233,429	819,257	23	21	15	4	6	6	3	
AVERAGE	16,817	13,731	30,343								
NEW ENGLAND	138	0	10,169								
Connecticut	138	0	6,893	X	X	X	X	X	X		
Massachusetts	0	0	0								
Maine	0	0	0								
New Hampshire	0	0	0								
Rhode Island	0	0	3,476	X	X	X					
Vermont	0	0	0								
MIDDLE ATLANTIC	280	0	0								
New Jersey	0	0	0								
New York*											
Pennsylvania	280	0	0								
EAST NORTH CENTRAL	0	0	478								
Illinois	0	0	0								
Indiana	0	0	0								
Michigan	0	0	0								
Ohio	0	0	478	X	X	X					
Wisconsin	0	0	0								
WEST NORTH CENTRAL	6,034	1,413	48,565								
Iowa	0	0	30,876								Thin layer isoelectric focusing
Kansas	0	0	0								
Minnesota	0	0	0								
Missouri	0	0	17,689	X	X	X					
Nebraska	0	0	0								
North Dakota	0	1,413	0								
South Dakota	6,034	0	0								
SOUTH ATLANTIC	206,797	114,931	383,883								
Delaware	28,656	0	1,460	X		X					
District of Columbia	38,292	5,218	6,868	X	X		X		X		
Florida	40,488	20,800	35,307	X	X	X	X	X			
Georgia	0	14,814	64,638	X	X	X					Bar's, pH 7.0 electrophoresis, HgA2
Maryland	95,508	19,462	122,608	X	X	X		X	X		Hemoglobin isoelectric focusing
North Carolina	2,628	15,655	68,360	X	X	X	X	X	X		
South Carolina	1,225	22,589	71,856	X	X					X	
Virginia	0	18,393	13,938	X		X					
West Virginia	0	0	830	X	X	X					
EAST SOUTH CENTRAL	15,078	65,587	131,627								
Alabama	0	33,160	71,398	X	X					X	Globin
Kentucky	0	7,132	0								
Mississippi	15,078	25,295	55,768	X	X						
Tennessee	0	0	4,461	X	X						
WEST SOUTH CENTRAL	407	47,523	71,548								
Arkansas	407	8,341	11,144	X	X						
Louisiana	0	2,806	28,740	X	X						
Oklahoma	0	3,816	3,738	X	X	X					
Texas	0	32,760	27,928	X	X			X	X		Isoelectric focusing
MOUNTAIN	7,251	0	164,114								
Arizona	0	0	0								
Colorado	0	0	163,925	X	X						
Idaho	6,696	0	0								
Montana	0	0	0								
Nevada	0	0	23			X					
New Mexico	0	0	166	X	X			X	X		
Utah	0	0	0								
Wyoming	555	0	0								
PACIFIC	22	0	3,893								
Alaska	0	0	0								
California	22	0	0								
Hawaii	0	0	0								
Oregon	0	0	0								
Washington	0	0	3,893	X	X	X				X	
TERRITORIES	49,882	3,975	5,000								
Guam	3,693	443	0								
Puerto Rico	7,613	0	35								Sickle cell preparation (metabisulfite)
Virgin Islands	38,576	3,532	4,965			X					

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

FIGURE 7.
STATE PUBLIC HEALTH LABORATORY CLINICAL CHEMISTRY SPECIMENS,
BY CATEGORY, FISCAL YEAR 1988



TOTAL: 10.3 MILLION SPECIMENS

TABLE 30. CLINICAL CHEMISTRY SPECIMENS

Lab & Region	Total Clinical Chemistry Specimens	Type of specimen			
		Clinical Chemistry	Urinalysis	Inborn Errors of Metabolism	Other Clinical Chemistry
(1)	(2)	(3)	(4)	(5)	(6)
TOTAL	10,257,688	952,197	108,371	9,115,745	81,375
AVERAGE	227,949	45,343	6,375	239,888	11,625
NEW ENGLAND	1,136,754	0	0	1,078,967	57,787
Connecticut	157,627	0	0	157,627	0
Massachusetts	936,823	0	0	879,036	57,787
Maine	16,803	0	0	16,803	0
New Hampshire	0	0	0	0	0
Rhode Island	25,501	0	0	25,501	0
Vermont	0	0	0	0	0
MIDDLE ATLANTIC	300,110	1,707	10	298,393	0
New Jersey	120,875	0	0	120,875	0
New York*					
Pennsylvania	179,235	1,707	10	177,518	0
EAST NORTH CENTRAL	2,303,922	9,009	0	2,294,913	0
Illinois	1,129,245	0	0	1,129,245	0
Indiana	0	0	0	0	0
Michigan	899,815	0	0	899,815	0
Ohio	188,723	0	0	188,723	0
Wisconsin	86,139	9,009	0	77,130	0
WEST NORTH CENTRAL	536,619	9,405	2,412	523,681	1,121
Iowa	0	0	0	0	0
Kansas	143,818	0	0	143,818	0
Minnesota	70,356	0	0	70,356	0
Missouri	288,396	0	0	288,396	0
Nebraska	2,818	0	0	2,818	0
North Dakota	18,293	0	0	18,293	0
South Dakota	12,938	9,405	2,412	0	1,121
SOUTH ATLANTIC	2,732,625	492,782	69,848	2,166,856	3,139
Delaware	7,698	4,079	3,619	0	0
District of Columbia	42,910	7,014	35,407	489	0
Florida	477,727	202,741	822	274,164	0
Georgia	165,425	22,873	902	141,650	0
Maryland	1,372,500	181,871	28,905	1,181,416	308
North Carolina	324,857	54,590	4	270,263	0
South Carolina	142,079	17,165	189	121,894	2,831
Virginia	116,206	2,449	0	113,757	0
West Virginia	83,223	0	0	83,223	0
EAST SOUTH CENTRAL	490,987	103,176	126	387,685	0
Alabama	115,284	10,166	126	104,992	0
Kentucky	200,094	13,983	0	186,111	0
Mississippi	79,027	79,027	0	0	0
Tennessee	96,582	0	0	96,582	0
WEST SOUTH CENTRAL	957,525	32,696	162	924,667	0
Arkansas	88,471	8,770	0	79,701	0
Louisiana	193,534	1,212	162	192,160	0
Oklahoma	96,890	0	0	96,890	0
Texas	578,630	22,714	0	555,916	0
MOUNTAIN	949,267	0	9,628	939,205	434
Arizona	0	0	0	0	0
Colorado	798,489	0	0	798,489	0
Idaho	8,962	0	8,688	274	0
Montana	15,669	0	0	15,669	0
Nevada	940	0	940	0	0
New Mexico	52,613	0	0	52,179	434
Utah	72,594	0	0	72,594	0
Wyoming	0	0	0	0	0
PACIFIC	501,407	19	10	501,378	0
Alaska	0	0	0	0	0
California	1,058	19	10	1,029	0
Hawaii	0	0	0	0	0
Oregon	147,438	0	0	147,438	0
Washington	352,913	0	0	352,913	0
TERRITORIES	348,472	303,403	26,175	0	18,894
Guam	3,628	937	2,691	0	0
Puerto Rico	14,637	5,466	4,279	0	4,892
Virgin Islands	330,207	297,000	19,205	0	14,002

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 31. CLINICAL CHEMISTRY-Clinical Chemistry Specimens and Types of Tests

Lab & Region	Number of Specimens	Type of test												
		Glucose	Cholesterol	BUN	Uric Acid	Trans-aminases	Alkaline Phosphatase	Total Proteins	Serum Iron	Iron Binding Capacity	Triglycerides	Bilirubin	T4, T3, T3 Uptake	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
TOTAL	952,197	20	16	16	17	15	15	13	8	7	13	16	8	
AVERAGE	45,343													
NEW ENGLAND	0													
Connecticut	0													
Massachusetts	0													
Maine	0													
New Hampshire	0													
Rhode Island	0													
Vermont	0													
MIDDLE ATLANTIC	1,707													
New Jersey	0													
New York*														
Pennsylvania	1,707	X	X	X	X			X	X		X			
EAST NORTH CENTRAL	9,009													
Illinois	0													
Indiana	0													
Michigan	0													
Ohio	0													
Wisconsin	9,009	X	X	X	X	X	X	X	X	X	X	X	X	
WEST NORTH CENTRAL	9,405													
Iowa	0													
Kansas	0													
Minnesota	0													
Missouri	0													
Nebraska	0													
North Dakota	0													
South Dakota	9,405	X	X	X	X	X	X	X				X		
SOUTH ATLANTIC	492,782													
Delaware	4,079	X		X										
District of Columbia	7,014	X	X	X	X			X	X	X	X	X	X	
Florida	202,741	X	X	X	X	X	X	X	X	X	X	X	X	
Georgia	22,873	X	X		X			X						
Maryland	181,871	X	X	X	X	X	X	X	X	X	X	X	X	
North Carolina	54,590	X	X	X	X	X	X	X	X	X	X	X	X	
South Carolina	17,165	X	X	X	X	X	X	X			X	X	X	
Virginia	2,449					X						X		
West Virginia	0													
EAST SOUTH CENTRAL	103,176													
Alabama	10,166	X	X	X	X	X	X	X	X	X	X	X	X	
Kentucky	13,983	X	X	X	X	X	X	X			X	X	X	
Mississippi	79,027	X	X	X	X	X	X				X	X		
Tennessee	0													
WEST SOUTH CENTRAL	32,696													
Arkansas	8,770	X	X	X	X	X	X				X	X		
Louisiana	1,212	X		X	X	X	X					X		
Oklahoma	0													
Texas	22,714	X												
MOUNTAIN	0													
Arizona	0													
Colorado	0													
Idaho	0													
Montana	0													
Nevada	0													
New Mexico	0													
Utah	0													
Wyoming	0													
PACIFIC	19													
Alaska	0													
California	19	X				X								
Hawaii	0													
Oregon	0													
Washington	0													
TERRITORIES	303,403													
Guam	937	X	X	X	X		X	X				X		
Puerto Rico	5,466	X	X	X	X	X	X	X			X	X	X	
Virgin Islands	297,000	X	X	X	X	X	X	X	X	X	X	X		

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 31. CLINICAL CHEMISTRY-Clinical Chemistry Specimens and Types of Tests (continued)

Lab & Region	Number of Specimens	Type of test										Other
		Sodium	Potassium	Phosphorus	Calcium	Creatinine	Acid Phosphatase	Albumin	Chloride	LDH		
(1)	(2)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	
TOTAL	952,197	13	13	9	11	15	3	10	13	11		
AVERAGE	45,343											
NEW ENGLAND	0											
Connecticut	0											
Massachusetts	0											
Maine	0											
New Hampshire	0											
Rhode Island	0											
Vermont	0											
MIDDLE ATLANTIC	1,707											
New Jersey	0											
New York*												
Pennsylvania	1,707	X	X	X	X	X		X	X			
EAST NORTH CENTRAL	9,009											
Illinois	0											
Indiana	0											
Michigan	0											
Ohio	0											
Wisconsin	9,009	X	X	X	X	X		X	X	X	Amylase, GGT, HDL, lithium, magnesium, stones, cortisol, ferritin, folate, TSH, vit. B12, VMA, 5-HIAA	
WEST NORTH CENTRAL	9,405											
Iowa	0											
Kansas	0											
Minnesota	0											
Missouri	0											
Nebraska	0											
North Dakota	0											
South Dakota	9,405	X	X	X	X	X		X	X	X	Amylase, CPK, GGTP, osmality, RA	
SOUTH ATLANTIC	492,782											
Delaware	4,079	X	X			X			X		CO2, ketones	
District of Columbia	7,014									X		
Florida	202,741	X	X		X	X	X	X	X	X		
Georgia	22,873	X	X			X					Lithium, SGOT, SGPT	
Maryland	181,871	X	X	X	X	X		X	X	X	HDL cholesterol, magnesium, A/G ratio, CPK, GGTP, FEP, creatinine clearance, pregnancy test (blood), venipuncture	
North Carolina	54,590	X	X	X	X	X	X	X	X	X		
South Carolina	17,185	X	X	X	X	X		X	X	X	HDL, LDL, AG ratio	
Virginia	2,449											
West Virginia	0											
EAST SOUTH CENTRAL	103,178											
Alabama	10,166	X	X	X	X	X		X	X		Phenobarbital, dilantin, theophylline	
Kentucky	13,983	X	X	X	X	X		X	X	X	Lithium, GGTP, amyl, CPK, HDL	
Mississippi	79,027	X	X			X			X	X	Anticonvulsants	
Tennessee	0											
WEST SOUTH CENTRAL	32,696											
Arkansas	8,770				X	X			X	X		
Louisiana	1,212					X						
Oklahoma	0											
Texas	22,714											
MOUNTAIN	0											
Arizona	0											
Colorado	0											
Idaho	0											
Montana	0											
Nevada	0											
New Mexico	0											
Utah	0											
Wyoming	0											
PACIFIC	19											
Alaska	0											
California	19											
Hawaii	0											
Oregon	0											
Washington	0											
TERRITORIES	303,403											
Guam	937											
Puerto Rico	5,466	X	X	X	X	X	X	X	X	X	CPK	
Virgin Islands	297,000											

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 32. CLINICAL CHEMISTRY-Urinalysis Specimens

Lab & Region	Number of Specimens	Type of procedure			
		Routine	Microscopic	Pregnancy Test	Other
(1)	(2)	(3)	(4)	(5)	(6)
TOTAL	108,371	17	16	8	
AVERAGE	6,375				
NEW ENGLAND	0				
Connecticut	0				
Massachusetts	0				
Maine	0				
New Hampshire	0				
Rhode Island	0				
Vermont	0				
MIDDLE ATLANTIC	10				
New Jersey	0				
New York*					
Pennsylvania	10	X	X		
EAST NORTH CENTRAL	0				
Illinois	0				
Indiana	0				
Michigan	0				
Ohio	0				
Wisconsin	0				
WEST NORTH CENTRAL	2,412				
Iowa	0				
Kansas	0				
Minnesota	0				
Missouri	0				
Nebraska	0				
North Dakota	0				
South Dakota	2,412	X	X	X	
SOUTH ATLANTIC	69,848				
Delaware	3,619	X	X	X	
District of Columbia	35,407	X	X	X	
Florida	822	X	X		
Georgia	902	X	X		
Maryland	28,905	X	X	X	Protein, quantitative
North Carolina	4	X	X		
South Carolina	189	X	X		
Virginia	0				
West Virginia	0				
EAST SOUTH CENTRAL	126				
Alabama	126	X	X		
Kentucky	0				
Mississippi	0				
Tennessee	0				
WEST SOUTH CENTRAL	162				
Arkansas	0				
Louisiana	162	X	X		
Oklahoma	0				
Texas	0				
MOUNTAIN	9,628				
Arizona	0				
Colorado	0				
Idaho	8,688	X	X	X	
Montana	0				
Nevada	940	X	X		
New Mexico	0				
Utah	0				
Wyoming	0				
PACIFIC	10				
Alaska	0				
California	10	X		X	
Hawaii	0				
Oregon	0				
Washington	0				
TERRITORIES	26,175				
Guam	2,691	X	X	X	
Puerto Rico	4,279	X	X		
Virgin Islands	19,205	X	X	X	

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 33. CLINICAL CHEMISTRY-Inborn Errors of Metabolism Assays

Lab & Region	Number of Specimens	Type of inborn error assay						
		PKU	Tyrosinemia	Galactosemia	MSUD	Hypothyroidism	Amino Acid Chromatography	Homocystinuria
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
TOTAL	9,115,745	37	10	26	10	36	4	8
AVERAGE	239,888							
NEW ENGLAND	1,078,967							
Connecticut	157,627	X	X	X		X		
Massachusetts	879,036	X	X	X	X	X	X	
Maine	16,803	X	X	X	X	X		X
New Hampshire	0							
Rhode Island	25,501	X	X				X	
Vermont	0							
MIDDLE ATLANTIC	298,393							
New Jersey	120,875	X		X		X		
New York*								
Pennsylvania	177,518	X				X		
EAST NORTH CENTRAL	2,294,913							
Illinois	1,129,245	X		X		X		
Indiana	0							
Michigan	899,815	X		X	X	X		
Ohio	188,723	X		X		X		X
Wisconsin	77,130	X		X	X	X		X
WEST NORTH CENTRAL	523,681							
Iowa	0							
Kansas	143,818	X		X		X		
Minnesota	70,356	X		X		X		
Missouri	288,396	X		X		X		
Nebraska	2,818	X		X		X		
North Dakota	18,293	X				X		
South Dakota	0							
SOUTH ATLANTIC	2,168,856							
Delaware	0							
District of Columbia	489					X		
Florida	274,164	X		X		X		
Georgia	141,650	X	X	X	X	X		X
Maryland	1,161,416	X	X	X	X	X		
North Carolina	270,263	X		X		X		
South Carolina	121,894	X	X			X		
Virginia	113,757	X		X	X	X		X
West Virginia	83,223	X		X		X		
EAST SOUTH CENTRAL	387,685							
Alabama	104,992	X				X	X	
Kentucky	186,111	X		X		X		
Mississippi	0							
Tennessee	96,582	X				X		
WEST SOUTH CENTRAL	924,667							
Arkansas	79,701	X				X		
Louisiana	192,160	X				X		
Oklahoma	96,890	X				X		
Texas	555,916	X	X	X		X		
MOUNTAIN	939,205							
Arizona	0							
Colorado	798,489	X		X	X	X		X
Idaho	274	X						
Montana	15,669	X	X	X		X		
Nevada	0							
New Mexico	52,179	X		X	X	X		X
Utah	72,594	X		X		X		
Wyoming	0							
PACIFIC	501,378							
Alaska	0							
California	1,029	X		X		X		
Hawaii	0							
Oregon	147,436	X	X	X	X	X	X	X
Washington	352,913	X				X		
TERRITORIES	0							
Guam	0							
Puerto Rico	0							
Virgin Islands	0							

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 33. CLINICAL CHEMISTRY-Inborn Errors of Metabolism Assays (continued)

Lab & Region	Number of Specimens	Type of inborn error assay				
		Maternal PKU	Amino Acid Disorders	Organic Acid Disorders	Glucosurias	Other
(1)	(2)	(10)	(11)	(12)	(13)	(14)
TOTAL	8,115,745	6	1	1	1	
AVERAGE	239,888					
NEW ENGLAND	1,078,967					
Connecticut	157,627					Tay-Sachs
Massachusetts	879,036					Congenital toxoplasmosis
Maine	16,803					
New Hampshire	0					
Rhode Island	25,501					
Vermont	0					
MIDDLE ATLANTIC	298,393					
New Jersey	120,875					
New York*						
Pennsylvania	177,518	X				Plasma phenylalanine, plasma tyrosine, plasma T4, serum TSH, serum TBG & FT4
EAST NORTH CENTRAL	2,294,913					
Illinois	1,129,245					Biotinidase, 17-OH-progesterone
Indiana	0					
Michigan	899,815					Biotinidase deficiency, hemoglobinopathies
Ohio	188,723					
Wisconsin	77,130					Immunoreactive trypsin (IRT)
WEST NORTH CENTRAL	523,681					
Iowa	0					
Kansas	143,818					
Minnesota	70,356					
Missouri	288,396					
Nebraska	2,818					Biotinidase
North Dakota	18,293					
South Dakota	0					
SOUTH ATLANTIC	2,166,856					
Delaware	0					
District of Columbia	489					
Florida	274,164					
Georgia	141,650					
Maryland	1,161,416	X		X	X	
North Carolina	270,263	X				
South Carolina	121,894					
Virginia	113,757					Biotinidase
West Virginia	83,223					
EAST SOUTH CENTRAL	387,685					
Alabama	104,992	X				
Kentucky	186,111					
Mississippi	0					
Tennessee	96,582					
WEST SOUTH CENTRAL	924,667					
Arkansas	79,701					
Louisiana	192,160					
Oklahoma	96,890					
Texas	555,916					Hemoglobinopathy
MOUNTAIN	939,205					
Arizona	0					
Colorado	798,489					Cystic Fibrosis
Idaho	274					
Montana	15,669					
Nevada	0					
New Mexico	52,179					Quantitative serum PKU, quantitative serum galactosemia
Utah	72,594					
Wyoming	0					
PACIFIC	501,378					
Alaska	0					
California	1,029	X				
Hawaii	0					
Oregon	147,436	X	X			
Washington	352,913					CAH
TERRITORIES	0					
Guam	0					
Puerto Rico	0					
Virgin Islands	0					

* New York did not report for fiscal year 1988.
NOTE: NA = Data not available.

TABLE 34. CLINICAL CHEMISTRY-Other Clinical Chemistry Specimens

Lab & Region	Number of Specimens	Specimen/Type of procedure
(1)	(2)	(3)
TOTAL	81,375	
AVERAGE	11,625	
NEW ENGLAND	57,787	
Connecticut	0	
Massachusetts	57,787	HIV - ELISA
Maine	0	
New Hampshire	0	
Rhode Island	0	
Vermont	0	
MIDDLE ATLANTIC	0	
New Jersey	0	
New York*		
Pennsylvania	0	
EAST NORTH CENTRAL	0	
Illinois	0	
Indiana	0	
Michigan	0	
Ohio	0	
Wisconsin	0	
WEST NORTH CENTRAL	1,121	
Iowa	0	
Kansas	0	
Minnesota	0	
Missouri	0	
Nebraska	0	
North Dakota	0	
South Dakota	1,121	Feces (occult blood) - biochemical
SOUTH ATLANTIC	3,139	
Delaware	0	
District of Columbia	0	
Florida	0	
Georgia	0	
Maryland	308	Feces - white blood cells, fat, qualitative, occult blood, hemocult slide test
North Carolina	0	
South Carolina	2,831	Alpha feta protein (AFP), venipunctures
Virginia	0	
West Virginia	0	
EAST SOUTH CENTRAL	0	
Alabama	0	
Kentucky	0	
Mississippi	0	
Tennessee	0	
WEST SOUTH CENTRAL	0	
Arkansas	0	
Louisiana	0	
Oklahoma	0	
Texas	0	
MOUNTAIN	434	
Arizona	0	
Colorado	0	
Idaho	0	
Montana	0	
Nevada	0	
New Mexico	434	Serum Vet. T4, serum Vet. cortisol - RIA
Utah	0	
Wyoming	0	
PACIFIC	0	
Alaska	0	
California	0	
Hawaii	0	
Oregon	0	
Washington	0	
TERRITORIES	18,894	
Guam	0	
Puerto Rico	4,892	Blood - phenitoin (phenobarbital), primidone (carbamazepine, Zarontin), deparone (theophylline), lithium
Virgin Islands	14,002	Blood - blotting paper

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 35. PATHOLOGY SPECIMENS

Lab & Region	Total Pathology Specimens	Exfoliative Cytology Specimen	Cytogenetic Specimen	Other Pathology Specimen	
				Number of Specimens	Type of specimen
(1)	(2)	(3)	(4)	(5)	(6)
TOTAL	504,599	418,979	2,769	1,287	
AVERAGE	50,460	52,372	692	257	
NEW ENGLAND	0	0	0	0	
Connecticut	0	0	0	0	
Massachusetts	0	0	0	0	
Maine	0	0	0	0	
New Hampshire	0	0	0	0	
Rhode Island	0	0	0	0	
Vermont	0	0	0	0	
MIDDLE ATLANTIC	0	0	0	0	
New Jersey	0	0	0	0	
New York*					
Pennsylvania	0	0	0	0	
EAST NORTH CENTRAL	98,414	96,267	2,147	0	
Illinois	0	0	0	0	
Indiana	0	0	0	0	
Michigan	0	0	0	0	
Ohio	0	0	0	0	
Wisconsin	98,414	96,267	2,147	0	
WEST NORTH CENTRAL	5	0	5	0	
Iowa	0	0	0	0	
Kansas	0	0	0	0	
Minnesota	5	0	5	0	
Missouri	0	0	0	0	
Nebraska	0	0	0	0	
North Dakota	0	0	0	0	
South Dakota	0	0	0	0	
SOUTH ATLANTIC	300,208	298,971	0	1,237	
Delaware	4,558	3,380	0	1,178	Hemocult
District of Columbia	14,611	14,611	0	0	
Florida	0	0	0	0	
Georgia	0	0	0	0	
Maryland	51,490	51,487	0	3	Autopsies
North Carolina	164,496	164,496	0	0	
South Carolina	0	0	0	0	
Virginia	0	0	0	0	
West Virginia	65,053	64,997	0	56	Oral, breast, penis, sputum
EAST SOUTH CENTRAL	0	0	0	0	
Alabama	0	0	0	0	
Kentucky	0	0	0	0	
Mississippi	0	0	0	0	
Tennessee	0	0	0	0	
WEST SOUTH CENTRAL	0	0	0	0	
Arkansas	0	0	0	0	
Louisiana	0	0	0	0	
Oklahoma	0	0	0	0	
Texas	0	0	0	0	
MOUNTAIN	24,408	23,741	617	50	
Arizona	0	0	0	0	
Colorado	0	0	0	0	
Idaho	617	0	617	0	
Montana	0	0	0	0	
Nevada	0	0	0	0	
New Mexico	23,791	23,741	0	50	Breast nipple discharge
Utah	0	0	0	0	
Wyoming	0	0	0	0	
PACIFIC	0	0	0	0	
Alaska	0	0	0	0	
California	0	0	0	0	
Hawaii	0	0	0	0	
Oregon	0	0	0	0	
Washington	0	0	0	0	
TERRITORIES	81,564	0	0	0	
Guam	0	0	0	0	
Puerto Rico	0	0	0	0	
Virgin Islands	81,564	NA	NA	NA	

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

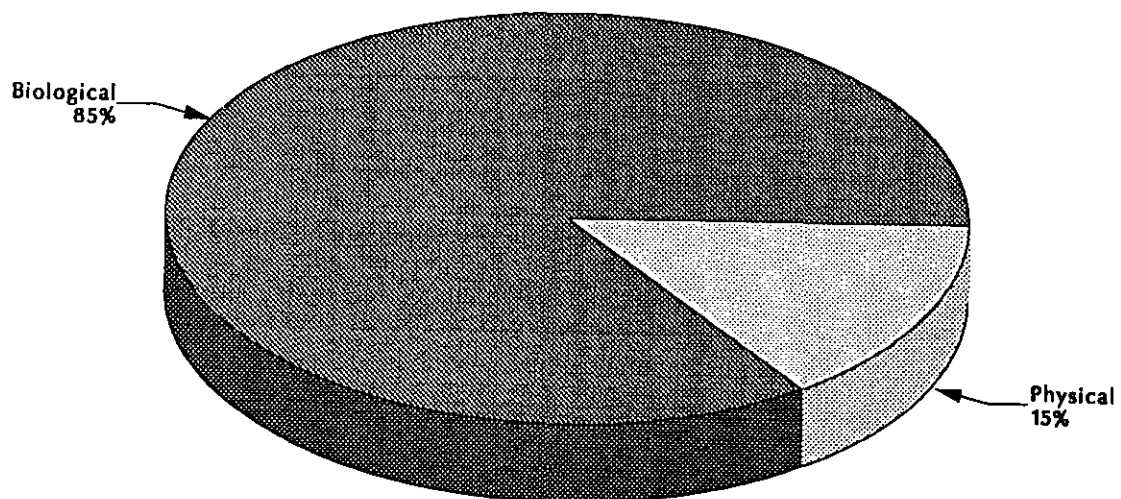
TABLE 36. OCCUPATIONAL SAFETY AND HEALTH-Biological Samples

Lab & Region (1)	Total Biological Samples (2)
TOTAL	3,158
AVERAGE	395
NEW ENGLAND	1,948
Connecticut	1,460
Massachusetts	10
Maine	30
New Hampshire	448
Rhode Island	0
Vermont	0
MIDDLE ATLANTIC	0
New Jersey	0
New York*	
Pennsylvania	0
EAST NORTH CENTRAL	250
Illinois	0
Indiana	0
Michigan	250
Ohio	0
Wisconsin	0
WEST NORTH CENTRAL	50
Iowa	0
Kansas	0
Minnesota	0
Missouri	0
Nebraska	0
North Dakota	50
South Dakota	0
SOUTH ATLANTIC	910
Delaware	0
District of Columbia	0
Florida	910
Georgia	0
Maryland	0
North Carolina	0
South Carolina	0
Virginia	0
West Virginia	0
EAST SOUTH CENTRAL	0
Alabama	0
Kentucky	0
Mississippi	0
Tennessee	NA
WEST SOUTH CENTRAL	0
Arkansas	0
Louisiana	0
Oklahoma	0
Texas	0
MOUNTAIN	0
Arizona	0
Colorado	0
Idaho	0
Montana	0
Nevada	0
New Mexico	0
Utah	0
Wyoming	0
PACIFIC	0
Alaska	0
California	0
Hawaii	0
Oregon	0
Washington	0
TERRITORIES	0
Guam	0
Puerto Rico	0
Virgin Islands	0

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

FIGURE 8.
STATE PUBLIC HEALTH LABORATORY TOXICOLOGY SPECIMENS,
BY CATEGORY, FISCAL YEAR 1988



TOTAL: 1.1 MILLION SPECIMENS

TABLE 37. TOXICOLOGY-Biological Samples

Lab & Region	Total Biological Samples	Blood samples							Other
		Ethyl Alcohol	Other Volatiles	Drugs and Narcotics	Lead	Other Metallic Poisons	Other Poisons	Insecticides	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
TOTAL	906,923								
AVERAGE	23,866								
NEW ENGLAND	309,280								
Connecticut	41,827	F	F	F	O		F		F - Blood typing
Massachusetts	188,516			F	O				O - Lead in animal blood
Maine	12,709	F		F/O	F			F/O	
New Hampshire	13,626	F	F		O				O - Erythrocyte protoporphyrin (child)
Rhode Island	47,734	F/O	F/O	F/O	F/O	F/O			
Vermont	4,868	F							
MIDDLE ATLANTIC	122,117								
New Jersey	116,433				O	O		O	O - Erythrocyte protoporphyrin
New York*									
Pennsylvania	5,684	F	F	O	O	O	O		
EAST NORTH CENTRAL	78,160								
Illinois	17,338				O				
Indiana	1,167				O				O - Dove blood for lead
Michigan	1,401							O	O - PCB, PBB
Ohio	13,979	F/O	F/O	F/O	F/O	F/O	F/O	F/O	
Wisconsin	44,275	F/O	F/O	F/O	O	O	O		Carbon monoxide, cholinesterase
WEST NORTH CENTRAL	14,078								
Iowa	0								
Kansas	0								
Minnesota	0								
Missouri	32				O				
Nebraska	1,389	F			O				
North Dakota	3,122	F	F	F			F	F	
South Dakota	9,535	F		F/O					
SOUTH ATLANTIC	237,224								
Delaware	4,984				O				O - Erythrocyte protoporphyrin
District of Columbia	83,785				O				
Florida	19,211				O				
Georgia	0								
Maryland	34,446			O	O				
North Carolina	19,943				O				
South Carolina	74,855	O		O	O				
Virginia	0								
West Virginia	0								
EAST SOUTH CENTRAL	9,428								
Alabama	6				O				
Kentucky	9,422	F	F	F	F	F			
Mississippi	0								
Tennessee	0								
WEST SOUTH CENTRAL	84,973								
Arkansas	2,397	O	O	O	O	O	O	O	
Louisiana	82,576				O				
Oklahoma	0								
Texas	0								
MOUNTAIN	43,283								
Arizona	150				O				
Colorado	27,896	F			O				
Idaho	1,440	F						O	O-PCBs
Montana	6				O				
Nevada	0								
New Mexico	5,986	F		F		F	F		F - Salicylates, acetaminophen, acid phosphate, carbon monoxides
Utah	4,053	F	F	F		F	F		
Wyoming	3,752	F		F					
PACIFIC	7,531								
Alaska	2,685								
California	4,844	F			O				O - FEP
Hawaii	0								
Oregon	0								
Washington	2				O				
TERRITORIES	849								
Guam	0								
Puerto Rico	849	X							
Virgin Islands	0								

* New York did not report for fiscal year 1988.
NOTE: F = Forensic, O = Other.

TABLE 37. TOXICOLOGY-Biological Samples (continued)

Lab & Region	Urine samples							
	Ethyl Alcohol (11)	Other Volatiles (12)	Drugs and Narcotics (13)	Lead (14)	Other Metallic Poisons (15)	Other Poisons (16)	Insecticides (17)	Other (18)
NEW ENGLAND								
Connecticut	F		F	O				
Massachusetts			F	O				
Maine	F/O	F/O	F/O	F/O	F/O	F/O	F/O	
New Hampshire				O				
Rhode Island	F	F	F/O	O	F	F/O		
Vermont			F					
MID-ATLANTIC								
New Jersey			O					
New York*								
Pennsylvania			O		O			
EAST NORTH CENTRAL								
Illinois								
Indiana								
Michigan								O - Pesticides, fire retardants
Ohio	F/O	F/O	F/O	F/O			F/O	
Wisconsin	F/O	F/O	O	O	O			
WEST NORTH CENTRAL								
Iowa								
Kansas								
Minnesota								
Missouri								
Nebraska								
North Dakota	F	F	F				F	F
South Dakota	F		F					
SOUTH ATLANTIC								
Delaware								
District of Columbia			O					
Florida								
Georgia								
Maryland			O					
North Carolina								
South Carolina	O		O	O	O			
Virginia								
West Virginia								
EAST SOUTH CENTRAL								
Alabama								
Kentucky		F	F		F	F		
Mississippi								
Tennessee								
WEST SOUTH CENTRAL								
Arkansas	O	O	O		O	O	O	
Louisiana								
Oklahoma								
Texas								
MOUNTAIN								
Arizona								
Colorado			F/O					
Idaho	F		F				O	
Montana								
Nevada								
New Mexico	F		F			F		
Utah	F		F					
Wyoming	F		F					
PACIFIC								
Alaska			O					
California			O					O - PCP
Hawaii								
Oregon								
Washington					O			
TERRITORIES								
Guam								
Puerto Rico								
Virgin Islands								

* New York did not report for fiscal year 1988.

NOTE: F = Forensic, O = Other.

TABLE 37. TOXICOLOGY-Biological Samples (continued)

Lab & Region (11)	Body tissue samples							
	Ethyl Alcohol (20)	Other Volatiles (21)	Drugs and Narcotics (22)	Lead (23)	Other Metallic Poisons (24)	Other Poisons (25)	Insecticides (26)	Other (27)
NEW ENGLAND								
Connecticut	F	F	F					
Massachusetts								
Maine	F	F	F	F/O	F	F	F	
New Hampshire								
Rhode Island	F	F	F/O		F/O	F		
Vermont								
MID-ATLANTIC								
New Jersey								
New York*								
Pennsylvania								
EAST NORTH CENTRAL								
Illinois								
Indiana								
Michigan								
Ohio	F/O	F/O	F/O					
Wisconsin								
WEST NORTH CENTRAL								
Iowa								
Kansas								
Minnesota								
Missouri								
Nebraska			F			F	F	
North Dakota	F		F					
South Dakota								
SOUTH ATLANTIC								
Delaware								
District of Columbia								
Florida								
Georgia								
Maryland								
North Carolina								
South Carolina								
Virginia								
West Virginia								
EAST SOUTH CENTRAL								
Alabama	F	F	F	F	F	F		
Kentucky								
Mississippi								
Tennessee								
WEST SOUTH CENTRAL								
Arkansas	O	O	O		O	O	O	
Louisiana								
Oklahoma								
Texas								
MOUNTAIN								
Arizona								
Colorado								
Idaho								
Montana								
Nevada	F		F					
New Mexico	F		F			F		
Utah	F		F					
Wyoming								
PACIFIC								
Alaska								Dioxins, furans
California								
Hawaii								
Oregon								
Washington								
TERRITORIES								
Guam								
Puerto Rico								
Virgin Islands								

* New York did not report for fiscal year 1988.

NOTE: F = Forensic, O = Other.

TABLE 37. TOXICOLOGY-Biological Samples (continued)

Lab & Region (28)	Body fluid samples							
	Ethyl Alcohol (29)	Other Volatiles (30)	Drugs and Narcotics (31)	Lead (32)	Other Metallic Poisons (33)	Other Poisons (34)	Insecticides (35)	Other (36)
NEW ENGLAND								
Connecticut	F	F	F					
Massachusetts								
Maine	F/O	F/O	F/O	F/O	F/O	F/O	F/O	
New Hampshire	F							
Rhode Island	F	F	F		F	F		
Vermont								
MID-ATLANTIC								
New Jersey								
New York*								
Pennsylvania								
EAST NORTH CENTRAL								
Illinois								
Indiana								
Michigan								O - Fire retardant
Ohio	F/O	F/O	F/O					
Wisconsin	O	O	O					
WEST NORTH CENTRAL								
Iowa								
Kansas								
Minnesota								
Missouri								
Nebraska								
North Dakota		F	F			F	F	
South Dakota	F							
SOUTH ATLANTIC								
Delaware								
District of Columbia								
Florida								
Georgia								
Maryland								
North Carolina								
South Carolina								
Virginia								
West Virginia								
EAST SOUTH CENTRAL								
Alabama								
Kentucky	F	F	F	F	F	F	F	
Mississippi								
Tennessee								
WEST SOUTH CENTRAL								
Arkansas	O	O	O		O	O	O	
Louisiana								
Oklahoma								
Texas								
MOUNTAIN								
Arizona								
Colorado								
Idaho		F						
Montana								
Nevada								
New Mexico	F				F			
Utah	F	F	F			F		
Wyoming	F		F					
PACIFIC								
Alaska								
California								
Hawaii								
Oregon								
Washington								
TERRITORIES								
Guam								
Puerto Rico								
Virgin Islands								

* New York did not report for fiscal year 1988.

NOTE: F = Forensic, O = Other.

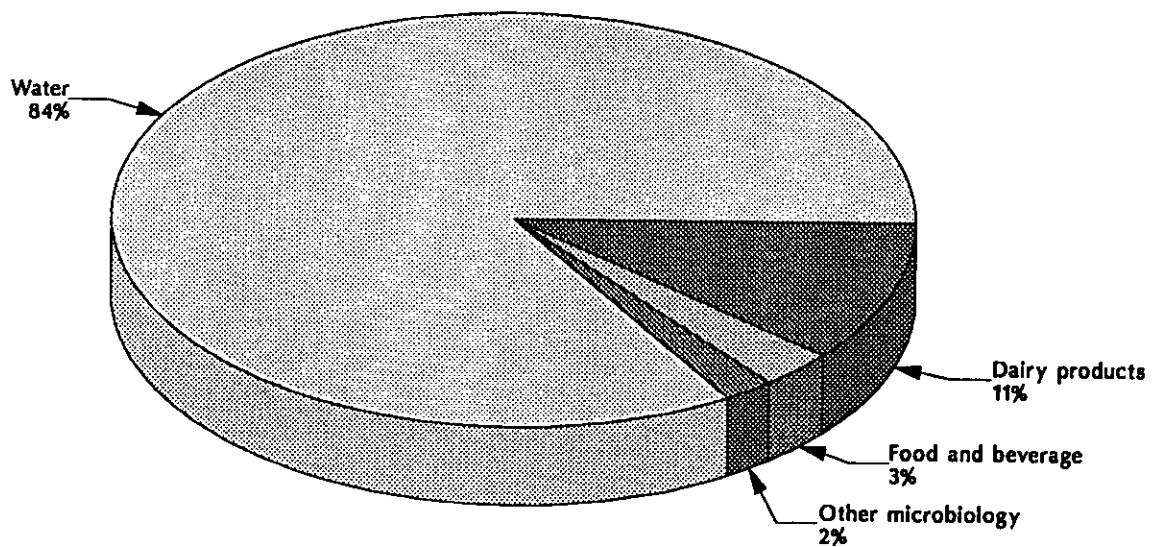
TABLE 37. TOXICOLOGY-Biological Samples (continued)

Lab & Region (28)	Breath samples	
	Volatiles (37)	Other biological samples (38)
NEW ENGLAND		
Connecticut	F	
Massachusetts		
Maine	F/O	
New Hampshire		
Rhode Island	F	F - Vaginal smears and swabs
Vermont	F	
MID-ATLANTIC		
New Jersey		
New York*		
Pennsylvania		
EAST NORTH CENTRAL		
Illinois		
Indiana		
Michigan		O - Fish, dog, rats, eagle
Ohio		
Wisconsin		
WEST NORTH CENTRAL		
Iowa		
Kansas		
Minnesota		
Missouri		
Nebraska		
North Dakota		
South Dakota		
SOUTH ATLANTIC		
Delaware		
District of Columbia		
Florida		
Georgia		
Maryland		
North Carolina		
South Carolina		
Virginia		
West Virginia		
EAST SOUTH CENTRAL		
Alabama		
Kentucky		
Mississippi		
Tennessee		
WEST SOUTH CENTRAL		
Arkansas		
Louisiana		
Oklahoma		
Texas		
MOUNTAIN		
Arizona		
Colorado	F	
Idaho	F	
Montana		
Nevada		
New Mexico		
Utah		
Wyoming	F	
PACIFIC		
Alaska		
California		
Hawaii		
Oregon		
Washington		
TERRITORIES		
Guam		
Puerto Rico		
Virgin Islands		

* New York did not report for fiscal year 1988.
NOTE: F = Forensic, O = Other.

***LABORATORY
ENVIRONMENTAL
WORKLOAD***

FIGURE 9.
STATE PUBLIC HEALTH LABORATORY ENVIRONMENTAL
MICROBIOLOGY SAMPLES, BY CATEGORY, FISCAL YEAR 1988



TOTAL: 2.2 MILLION SAMPLES

TABLE 38. ENVIRONMENTAL MICROBIOLOGY SAMPLES

Lab & Region (1)	Total Environmental Microbiology (2)	Type of sample			
		Water (3)	Dairy Products (4)	Food and Beverage (5)	Other Microbiology (6)
TOTAL	2,202,178	1,842,814	255,437	62,758	41,169
AVERAGE	42,350	37,608	7,513	1,335	2,287
NEW ENGLAND	81,168	68,102	8,720	4,051	295
Connecticut	15,818	11,305	3,735	421	157
Massachusetts	4,541	148	2,405	1,988	0
Maine	17,313	17,313	0	0	0
New Hampshire	2,127	291	1,287	486	63
Rhode Island	13,462	10,971	1,293	1,124	74
Vermont	28,107	28,074	0	32	1
MIDDLE ATLANTIC	5,418	2,177	2,980	261	0
New Jersey	5,302	2,171	2,980	151	0
New York*					
Pennsylvania	116	6	0	110	0
EAST NORTH CENTRAL	378,029	318,940	33,171	2,680	23,238
Illinois	40,319	30,378	7,973	611	1,357
Indiana	76,397	70,992	3,878	1,529	0
Michigan	118,093	94,212	0	0	21,881
Ohio	70,083	48,285	21,322	478	0
Wisconsin	75,137	75,073	0	64	0
WEST NORTH CENTRAL	281,948	264,467	10,264	6,342	875
Iowa	44,709	44,493	162	54	0
Kansas	48,982	48,982	0	0	0
Minnesota	12,500	12,500	0	0	0
Missouri	109,294	101,219	1,961	6,114	0
Nebraska	25,150	25,150	0	0	0
North Dakota	21,968	12,802	8,141	150	875
South Dakota	19,345	19,321	0	24	0
SOUTH ATLANTIC	579,972	514,074	40,780	25,118	0
Delaware	13,178	12,391	579	208	0
District of Columbia	172	0	0	172	0
Florida	261,082	257,208	1,903	1,971	0
Georgia	173	3	74	96	0
Maryland	124,728	98,511	7,128	19,089	0
North Carolina	51,598	51,226	190	182	0
South Carolina	11,367	0	10,619	748	0
Virginia	71,314	57,120	11,556	2,638	0
West Virginia	48,360	37,615	8,731	14	0
EAST SOUTH CENTRAL	226,467	170,618	53,781	2,068	2
Alabama	86,305	63,683	22,301	321	0
Kentucky	9,744	6,570	2,530	644	0
Mississippi	76,346	58,976	17,236	132	2
Tennessee	54,072	41,389	11,714	969	0
WEST SOUTH CENTRAL	430,905	357,212	70,793	2,834	266
Arkansas	80,579	62,764	17,026	789	0
Louisiana	104,390	65,790	36,935	1,685	0
Oklahoma	0				
Texas	245,936	228,658	16,832	180	266
MOUNTAIN	124,832	114,201	8,758	1,857	18
Arizona	9,751	6,450	2,713	584	4
Colorado	19,424	18,285	1,002	137	0
Idaho	33,725	31,749	1,863	113	0
Montana	12,540	12,530	0	10	0
Nevada	18,834	16,885	1,704	245	0
New Mexico	10,160	8,390	1,478	282	12
Utah	7,916	7,471	0	445	0
Wyoming	12,482	12,441	0	41	0
PACIFIC	35,842	28,222	2,926	1,953	2,741
Alaska	86	81	0	5	0
California	4,581	3,140	0	575	866
Hawaii	11,422	7,478	2,926	383	637
Oregon	8,370	7,988	0	347	35
Washington	11,383	9,537	0	643	1,203
TERRITORIES	57,597	4,801	23,264	15,796	13,736
Guam	327	0	0	69	258
Puerto Rico	11,020	4,800	4,702	201	1,317
Virgin Islands	46,250	1	18,562	15,528	12,161

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 39. ENVIRONMENTAL MICROBIOLOGY-Water Samples

Lab & Region	Number of Samples	Type of sample and procedure							
		Potable				Non-Potable			
		Membrane Filter	Multiple Tube	Presence/Absence	Other	Membrane Filter	Multiple Tube	Presence/Absence	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
TOTAL	1,842,814	43	31	3	6	28	30	3	6
AVERAGE	37,608								
NEW ENGLAND	68,102								
Connecticut	11,305	X	X			X	X		
Massachusetts	148	X							
Maine	17,313	X				X			
New Hampshire	291						X		
Rhode Island	10,971	X					X		
Vermont	28,074	X				X			
MIDDLE ATLANTIC	2,177								
New Jersey	2,171	X				X	X		
New York*									
Pennsylvania	6	X				X			
EAST NORTH CENTRAL	318,940								
Illinois	30,378	X	X				X		
Indiana	70,992		X			X			
Michigan	94,212	X				X			
Ohio	48,285	X				X	X		
Wisconsin	75,073	X	X			X			
WEST NORTH CENTRAL	264,467								
Iowa	44,493		X			X			
Kansas	48,982	X				X			
Minnesota	12,500	X	X		X	X	X		
Missouri	101,219	X				X			X
Nebraska	25,150	X							
North Dakota	12,802	X	X			X	X		
South Dakota	19,321	X	X			X	X		
SOUTH ATLANTIC	514,074								
Delaware	12,391	X	X				X		
District of Columbia	0								
Florida	257,208	X	X			X	X		
Georgia	3							X	
Maryland	98,511	X	X				X		
North Carolina	51,226	X	X	X		X	X	X	
South Carolina	0								
Virginia	57,120	X	X			X	X		
West Virginia	37,615	X	X			X	X		
EAST SOUTH CENTRAL	170,618								
Alabama	63,683	X				X	X		
Kentucky	6,570	X	X		X	X	X	X	X
Mississippi	58,976	X	X				X		
Tennessee	41,389	X				X	X		
WEST SOUTH CENTRAL	357,212								
Arkansas	62,764	X				X			
Louisiana	65,790	X	X				X		
Oklahoma	0								
Texas	228,658	X				X			
MOUNTAIN	114,201								
Arizona	6,450	X	X			X	X		
Colorado	18,285	X	X				X		
Idaho	31,749	X	X	X	X	X	X		X
Montana	12,530	X	X						
Nevada	16,885	X	X			X	X		
New Mexico	8,390	X	X		X				X
Utah	7,471	X	X						
Wyoming	12,441		X						
PACIFIC	28,222								
Alaska	81		X				X		
California	3,140	X	X	X			X		
Hawaii	7,476	X	X		X	X	X		X
Oregon	7,988	X	X				X		
Washington	9,537	X	X				X		
TERRITORIES	4,801								
Guam	0								
Puerto Rico	4,800	X	X		X		X		X
Virgin Islands	1	X							

* New York did not report for fiscal year 1988.
NOTE: NA = Data not available.

TABLE 39. ENVIRONMENTAL MICROBIOLOGY-Water Samples (continued)

Lab & Region	Type of sample and procedure							
	Swimming Pools				Sewage and Waste			
	Membrane Filter	Multiple Tube	Presence/Absence	Other	Membrane Filter	Multiple Tube	Presence/Absence	Other
(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
TOTAL	24	23	2	7	16	26	0	0
NEW ENGLAND								
Connecticut	X			X		X		
Massachusetts								
Maine	X							
New Hampshire								
Rhode Island				X		X		
Vermont	X			X				
MIDDLE ATLANTIC								
New Jersey	X					X		
New York*								
Pennsylvania	X							
EAST NORTH CENTRAL								
Illinois	X	X				X		
Indiana		X		X	X			
Michigan	X				X			
Ohio	X	X			X	X		
Wisconsin					X	X		
WEST NORTH CENTRAL								
Iowa		X			X			
Kansas								
Minnesota	X	X			X	X		
Missouri	X							
Nebraska								
North Dakota	X	X		X	X	X		
South Dakota		X			X	X		
SOUTH ATLANTIC								
Delaware	X							
District of Columbia								
Florida	X	X			X	X		
Georgia								
Maryland		X				X		
North Carolina	X	X	X			X		
South Carolina								
Virginia	X							
West Virginia		X			X	X		
EAST SOUTH CENTRAL								
Alabama								
Kentucky	X		X		X	X		
Mississippi								
Tennessee	X							
WEST SOUTH CENTRAL								
Arkansas						X		
Louisiana		X				X		
Oklahoma								
Texas	X	X			X			
MOUNTAIN								
Arizona					X	X		
Colorado		X				X		
Idaho	X			X				
Montana	X	X						
Nevada	X	X			X	X		
New Mexico	X				X	X		
Utah	X	X			X	X		
Wyoming		X						
PACIFIC								
Alaska		X				X		
California		X				X		
Hawaii						X		
Oregon	X	X						
Washington		X				X		
TERRITORIES								
Guam								
Puerto Rico		X		X		X		
Virgin Islands								

* New York did not report for fiscal year 1988.

TABLE 40. ENVIRONMENTAL MICROBIOLOGY-Dairy Products Samples

Lab & Region	Number of Samples	Type of sample					
		Milk and Cream	Ice Cream	Cheese	Other Dairy Products	Frozen Desserts	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TOTAL	255,437	33	25	17	25	21	
AVERAGE	7,513						
NEW ENGLAND	8,720						
Connecticut	3,735	X	X	X	X	X	Plant equipment, empty containers
Massachusetts	2,405	X	X	X	X	X	Empty dairy containers, sweet water
Maine	0						
New Hampshire	1,287	X	X	X	X	X	
Rhode Island	1,293	X	X	X	X	X	
Vermont	0						
MIDDLE ATLANTIC	2,980						
New Jersey	2,980	X	X	X	X	X	
New York*							
Pennsylvania	0						
EAST NORTH CENTRAL	33,171						
Illinois	7,973	X	X	X	X	X	
Indiana	3,876	X	X	X	X	X	
Michigan	0						
Ohio	21,322	X	X	X	X	X	
Wisconsin	0						
WEST NORTH CENTRAL	10,264						
Iowa	162	X					
Kansas	0						
Minnesota	0						
Missouri	1,961	X	X	X	X	X	
Nebraska	0						
North Dakota	8,141	X	X	X	X	X	
South Dakota	0						
SOUTH ATLANTIC	40,780						
Delaware	579	X					
District of Columbia	0						
Florida	1,903	X	X			X	
Georgia	74	X	X			X	
Maryland	7,128	X	X		X	X	
North Carolina	190	X					
South Carolina	10,619	X	X		X	X	
Virginia	11,556	X	X		X	X	Milk containers
West Virginia	8,731	X			X		
EAST SOUTH CENTRAL	53,781						
Alabama	22,301	X	X		X	X	Yogurt
Kentucky	2,530	X	X	X	X	X	Containers
Mississippi	17,236	X			X		
Tennessee	11,714	X	X		X		
WEST SOUTH CENTRAL	70,793						
Arkansas	17,026	X	X	X	X	X	
Louisiana	36,935	X	X	X	X	X	Raw milk containers
Oklahoma	0						
Texas	16,832	X	X	X			
MOUNTAIN	8,758						
Arizona	2,713	X	X	X	X		
Colorado	1,002	X					
Idaho	1,863	X					
Montana	0						
Nevada	1,704	X	X	X	X	X	
New Mexico	1,476	X			X		
Utah	0						
Wyoming	0						
PACIFIC	2,926						
Alaska	0						
California	0						
Hawaii	2,926	X	X		X	X	Frozen dessert mixes
Oregon	0						
Washington	0						
TERRITORIES	23,264						
Guam	0						
Puerto Rico	4,702						Utensils
Virgin Islands	18,562	X	X	X	X		

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 41. ENVIRONMENTAL MICROBIOLOGY-Food and Beverage Samples

Lab & Region	Number of Samples	Type of sample			
		Food Quality	Food-Associated Disease Outbreaks	Seafood	Environmental
(1)	(2)	(3)	(4)	(5)	(6)
TOTAL	62,768	28	45	23	23
AVERAGE	1,335				
NEW ENGLAND	4,051				
Connecticut	421	X	X	X	X
Massachusetts	1,988	X	X	X	X
Maine	0				
New Hampshire	488	X	X	X	X
Rhode Island	1,124	X	X	X	X
Vermont	32	X	X	X	
MIDDLE ATLANTIC	281				
New Jersey	161	X	X	X	
New York*					
Pennsylvania	110	X	X		
EAST NORTH CENTRAL	2,680				
Illinois	811	X	X		X
Indiana	1,529	X	X		X
Michigan	0				
Ohio	478		X		X
Wisconsin	64		X		
WEST NORTH CENTRAL	6,342				
Iowa	54		X		X
Kansas	0				
Minnesota	0				
Missouri	6,114	X	X		X
Nebraska	0				
North Dakota	150	X	X		X
South Dakota	24		X		
SOUTH ATLANTIC	25,118				
Delaware	208	X	X	X	
District of Columbia	172	X	X	X	
Florida	1,971	X	X	X	X
Georgia	96		X		X
Maryland	19,089	X	X	X	X
North Carolina	182		X	X	
South Carolina	748		X		
Virginia	2,638	X	X	X	
West Virginia	14		X		
EAST SOUTH CENTRAL	2,068				
Alabama	321		X	X	
Kentucky	644	X	X		X
Mississippi	132		X	X	X
Tennessee	969		X		X
WEST SOUTH CENTRAL	2,634				
Arkansas	789	X	X	X	X
Louisiana	1,665	X	X	X	X
Oklahoma	0				
Texas	180	X	X	X	
MOUNTAIN	1,857				
Arizona	584	X	X	X	
Colorado	137	X	X		X
Idaho	113		X		
Montana	10		X		
Nevada	245		X		
New Mexico	282	X	X		
Utah	445		X		
Wyoming	41		X		
PACIFIC	1,953				
Alaska	5		X	X	
California	575		X		
Hawaii	383	X	X	X	X
Oregon	347		X	X	X
Washington	643	X	X	X	X
TERRITORIES	15,796				
Guam	69	X			X
Puerto Rico	201	X	X	X	
Virgin Islands	15,526	X			

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

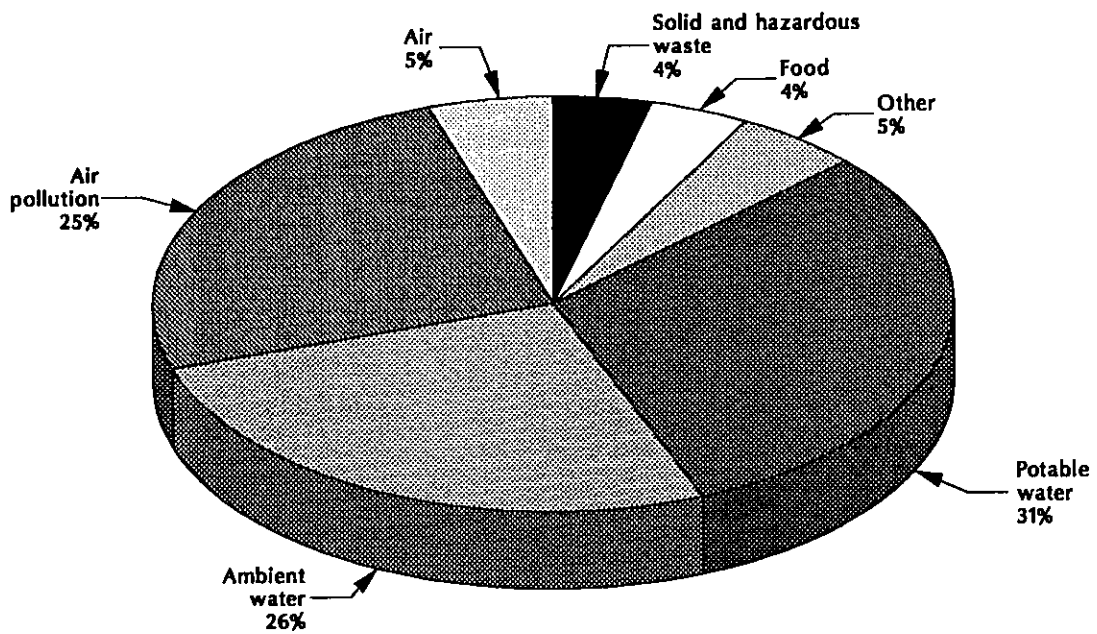
TABLE 42. ENVIRONMENTAL MICROBIOLOGY-Other Environmental Microbiology Samples

Lab & Region	Number of Samples	Type of sample
(1)	(2)	(3)
TOTAL	41,169	
AVERAGE	2,287	
NEW ENGLAND	295	
Connecticut	157	Shellfish
Massachusetts	0	
Maine	0	
New Hampshire	63	Paralytic shellfish poison
Rhode Island	74	P.S.P. (red tide toxin)
Vermont	1	Animal food supplement
MIDDLE ATLANTIC	0	
New Jersey	0	
New York*		
Pennsylvania	0	
EAST NORTH CENTRAL	23,238	
Illinois	1,357	Quality assurance and miscellaneous samples
Indiana	0	
Michigan	21,881	Swimming pool, surface water
Ohio	0	
Wisconsin	0	
WEST NORTH CENTRAL	875	
Iowa	0	
Kansas	0	
Minnesota	0	
Missouri	0	
Nebraska	0	
North Dakota	875	Sterilities (autoclave test strips)
South Dakota	0	
SOUTH ATLANTIC	0	
Delaware	0	
District of Columbia	0	
Florida	0	
Georgia	0	
Maryland	0	
North Carolina	0	
South Carolina	0	
Virginia	0	
West Virginia	0	
EAST SOUTH CENTRAL	2	
Alabama	0	
Kentucky	0	
Mississippi	2	Filth samples
Tennessee	0	
WEST SOUTH CENTRAL	266	
Arkansas	0	
Louisiana	0	
Oklahoma	0	
Texas	266	Mold counts
MOUNTAIN	18	
Arizona	4	Virus & parasite samples from water
Colorado	0	
Idaho	0	
Montana	0	
Nevada	0	
New Mexico	12	Plant and insect identification
Utah	0	
Wyoming	0	
PACIFIC	2,741	
Alaska	0	
California	866	Drug surveillance, shellfish for PSP
Hawaii	637	Staphylococcus phage typing, mother's milk, bottled water
Oregon	35	Bacillus thuringiensis
Washington	1,203	PSP (Paralytic Shellfish Poisoning)
TERRITORIES	13,736	
Guam	258	Vacuum (dirt), soil
Puerto Rico	1,317	Bottled and distilled waters, ice makers, utensils
Virgin Islands	12,161	Seafood, filters

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

FIGURE 10.
STATE PUBLIC HEALTH LABORATORY ENVIRONMENTAL
CHEMISTRY SAMPLES, BY CATEGORY, FISCAL YEAR 1988



TOTAL: 1.2 MILLION SAMPLES

TABLE 43. ENVIRONMENTAL CHEMISTRY SAMPLES

Lab & Region	Total Environmental Chemistry Samples	Type of sample								
		Potable Water	Ambient Water	Air	Air Pollution	Solid and Hazardous Waste	Food	Body Fluids and Tissue	Radiological	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
TOTAL	1,212,948	367,324	308,965	60,666	290,097	43,110	44,363	2,221	44,140	52,073
AVERAGE	27,567	8,183	9,967	2,637	18,340	2,053	1,530	202	1,635	2,367
NEW ENGLAND	115,114	37,957	4,479	591	53,885	3,158	6,997	373	6,739	1,135
Connecticut	32,888	13,359	2,845	291	7,685	2,974	3,877	0	521	1,134
Massachusetts	2,982	1,096	0	0	0	0	801	373	712	0
Maine	17,448	12,006	281	300	0	151	223	0	4,485	0
New Hampshire	10	0	0	0	0	0	9	0	0	1
Rhode Island	58,461	6,701	1,353	0	46,000	33	2,087	0	287	0
Vermont	5,529	4,795	0	0	0	0	0	0	734	0
MIDDLE ATLANTIC	10,942	1,461	3,306	1,415	0	2,281	720	0	0	1,759
New Jersey	10,942	1,461	3,306	1,415	0	2,281	720	0	0	1,759
New York*										
Pennsylvania	0									
EAST NORTH CENTRAL	196,104	91,967	76,665	12,519	0	78	1,504	624	10,846	1,901
Illinois	8,313	5,017	596	0	0	0	509	0	0	191
Indiana	22,562	15,897	3,881	0	0	78	995	1	0	1,710
Michigan	72,194	61,421	0	5,900	0	0	0	623	4,250	0
Ohio	65,163	NA	61,088	1,400	NA	NA	0	0	2,675	0
Wisconsin	29,872	9,632	11,100	5,219	0	0	0	0	3,921	0
WEST NORTH CENTRAL	288,848	48,559	21,263	1,484	189,810	5,321	6,798	608	6,792	8,217
Iowa	203,467	1,896	9,330	361	186,256	1,608	0	570	1,535	1,911
Kansas	14,368	5,098	4,276	7	1,586	1,230	13	0	1,848	310
Minnesota	11,453	6,309	2,058	333	0	2,216	0	0	537	0
Missouri	14,161	7,546	129	0	0	0	6,318	0	170	0
Nebraska	19,614	17,529	0	0	0	0	0	0	2,085	0
North Dakota	14,578	4,176	3,045	783	0	185	487	36	224	5,662
South Dakota	11,207	6,005	2,425	0	1,968	82	0	0	393	334
SOUTH ATLANTIC	340,691	130,885	150,488	9,991	7,639	20,848	12,013	0	7,971	1,056
Delaware	6,175	6,017	0	0	0	0	0	0	158	0
District of Columbia	82	0	0	0	0	0	82	0	0	0
Florida	23,786	22,973	770	0	0	0	43	0	0	0
Georgia	0									
Maryland	272,413	71,972	148,523	8,453	7,639	19,311	11,814	0	4,490	211
North Carolina	31,293	23,012	1,195	1,452	0	1,537	0	0	3,323	774
South Carolina	71	0	0	0	0	0	0	0	0	71
Virginia	0									
West Virginia	6,871	6,711	0	88	0	0	74	0	0	0
EAST SOUTH CENTRAL	22,461	16,552	660	132	1,296	921	866	14	1,251	769
Alabama	1,099	1,099	0	0	0	0	0	0	0	0
Kentucky	9,710	8,278	0	0	0	0	866	14	0	552
Mississippi	4,343	4,343	0	0	0	0	0	0	0	0
Tennessee	7,309	2,832	660	132	1,296	921	0	0	1,251	217
WEST SOUTH CENTRAL	41,409	16,155	10,380	33	0	1,800	10,021	0	2,995	25
Arkansas	4,039	2,499	47	0	0	0	708	0	785	0
Louisiana	15,080	2,606	4,243	33	0	0	8,153	0	0	25
Oklahoma	0									
Texas	22,310	11,050	6,090	0	0	1,800	1,160	0	2,210	0
MOUNTAIN	106,229	19,023	40,681	3,642	29,776	6,743	986	536	2,952	1,910
Arizona	9,374	924	3,650	2,800	0	1,860	20	120	0	0
Colorado	50,147	7,024	18,019	50	18,341	3,737	755	0	1,047	1,174
Idaho	5,896	881	2,938	0	1,854	29	101	0	93	0
Montana	7,665	1,329	1,387	165	4,619	161	4	0	0	0
Nevada	4,369	3,023	845	0	10	0	0	0	0	491
New Mexico	19,033	4,315	7,725	339	4,950	507	85	142	970	0
Utah	9,745	1,527	6,097	288	2	449	21	274	842	245
Wyoming	0									
PACIFIC	60,545	2,824	1,063	30,849	7,891	1,960	3,838	68	4,594	7,458
Alaska	0									
California	17,537	1,177	773	942	3,251	1,960	3,465	4	2,926	3,039
Hawaii	36,974	1,303	210	29,904	4,640	0	343	0	0	574
Oregon	0									
Washington	6,034	344	80	3	0	0	30	64	1,668	3,845
TERRITORIES	30,606	2,141	0	0	0	0	622	0	0	27,843
Guam	0									
Puerto Rico	30,606	2,141	0	0	0	0	622	0	0	27,843
Virgin Islands	0									

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 44. ENVIRONMENTAL CHEMISTRY-Water Samples-Potable

Lab & Region	Number of Samples	Type of substance identified			
		Synthetic Organic Chemicals	Insecticides and Herbicides	Inorganic Chemicals	Radionuclides
(1)	(2)	(3)	(4)	(5)	(6)
TOTAL	367,324	34	34	40	20
AVERAGE	9,183				
NEW ENGLAND	37,957				
Connecticut	13,359	X	X	X	
Massachusetts	1,096	X	X	X	
Maine	12,006	X	X	X	X
New Hampshire	0				
Rhode Island	6,701	X	X	X	X
Vermont	4,795	X		X	
MIDDLE ATLANTIC	1,481				
New Jersey	1,461	X	X	X	
New York*					
Pennsylvania	0				
EAST NORTH CENTRAL	91,967				
Illinois	5,017	X	X	X	
Indiana	15,897	X	X	X	
Michigan	61,421	X	X	X	X
Ohio	NA	X	X	X	X
Wisconsin	9,632	X	X	X	
WEST NORTH CENTRAL	48,559				
Iowa	1,896	X	X	X	X
Kansas	5,098	X	X	X	X
Minnesota	6,309	X	X	X	X
Missouri	7,546	X	X	X	X
Nebraska	17,529	X	X	X	X
North Dakota	4,176	X	X	X	X
South Dakota	6,005			X	X
SOUTH ATLANTIC	130,685				
Delaware	6,017	X	X	X	
District of Columbia	0				
Florida	22,973	X	X	X	
Georgia	0				
Maryland	71,972	X	X	X	X
North Carolina	23,012	X	X	X	X
South Carolina	0				
Virginia	0				
West Virginia	6,711		X	X	
EAST SOUTH CENTRAL	16,552				
Alabama	1,099			X	
Kentucky	8,278	X	X	X	
Mississippi	4,343	X	X	X	
Tennessee	2,832	X	X	X	X
WEST SOUTH CENTRAL	16,155				
Arkansas	2,499	X	X	X	X
Louisiana	2,606		X	X	X
Oklahoma	0				
Texas	11,050	X	X	X	X
MOUNTAIN	19,023				
Arizona	924	X	X	X	
Colorado	7,024			X	X
Idaho	881			X	
Montana	1,329	X	X	X	X
Nevada	3,023			X	
New Mexico	4,315	X	X	X	
Utah	1,527	X	X	X	X
Wyoming	0				
PACIFIC	2,824				
Alaska	0				
California	1,177	X	X	X	
Hawaii	1,303	X	X	X	
Oregon	0				
Washington	344	X			
TERRITORIES	2,141				
Guam	0				
Puerto Rico	2,141	X	X	X	
Virgin Islands	0				

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 44. ENVIRONMENTAL CHEMISTRY-Water Samples-Ambient (continued)

Lab & Region	Number of Samples	Type of substance identified			
		Synthetic Organic Chemicals	Insecticides and Herbicides	Inorganic Chemicals	Radionuclides
(7)	(8)	(9)	(10)	(11)	(12)
TOTAL	308,965	23	25	28	14
AVERAGE	9,967				
NEW ENGLAND	4,479				
Connecticut	2,845	X	X	X	X
Massachusetts	0				
Maine	281	X	X	X	X
New Hampshire	0				
Rhode Island	1,353		X	X	
Vermont	0				
MIDDLE ATLANTIC	3,306				
New Jersey	3,306	X	X	X	
New York*					
Pennsylvania	0				
EAST NORTH CENTRAL	78,665				
Illinois	598	X	X	X	
Indiana	3,881	X	X	X	
Michigan	0				
Ohio	61,088	X	X	X	X
Wisconsin	11,100	X	X	X	
WEST NORTH CENTRAL	21,263				
Iowa	9,330	X	X	X	X
Kansas	4,276	X	X	X	X
Minnesota	2,058	X	X	X	
Missouri	129	X	X	X	
Nebraska	0				
North Dakota	3,045	X	X	X	X
South Dakota	2,425			X	
SOUTH ATLANTIC	150,488				
Delaware	0				
District of Columbia	0				
Florida	770	X	X	X	
Georgia	0				
Maryland	148,523	X	X	X	X
North Carolina	1,195	X	X	X	X
South Carolina	0				
Virginia	0				
West Virginia	0				
EAST SOUTH CENTRAL	660				
Alabama	0				
Kentucky	0				
Mississippi	0				
Tennessee	660	X	X	X	X
WEST SOUTH CENTRAL	10,380				
Arkansas	47				X
Louisiana	4,243				X
Oklahoma	0				
Texas	6,090	X	X	X	X
MOUNTAIN	40,661				
Arizona	3,650	X	X	X	
Colorado	18,019	X	X	X	X
Idaho	2,938			X	
Montana	1,387	X	X	X	
Nevada	845			X	
New Mexico	7,725	X	X	X	
Utah	6,097	X	X	X	X
Wyoming	0				
PACIFIC	1,063				
Alaska	0				
California	773	X	X	X	
Hawaii	210			X	
Oregon	0				
Washington	80		X		
TERRITORIES	0				
Guam	0				
Puerto Rico	0				
Virgin Islands	0				

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 45. ENVIRONMENTAL CHEMISTRY-Air Samples

Lab & Region	Number of Samples	Type of sample		
		Particulates	Inorganics	Toxics
(1)	(2)	(3)	(4)	(5)
TOTAL	60,656	16	19	17
AVERAGE	2,637			
NEW ENGLAND	591			
Connecticut	291	X	X	X
Massachusetts	0			
Maine	300		X	X
New Hampshire	0			
Rhode Island	0			
Vermont	0			
MIDDLE ATLANTIC	1,415			
New Jersey	1,415	X	X	X
New York*				
Pennsylvania	0			
EAST NORTH CENTRAL	12,519			
Illinois	0			
Indiana	0			
Michigan	5,900	X	X	X
Ohio	1,400	X	X	X
Wisconsin	5,219	X	X	X
WEST NORTH CENTRAL	1,484			
Iowa	381	X	X	X
Kansas	7	X		X
Minnesota	333			X
Missouri	0			
Nebraska	0			
North Dakota	783	X		
South Dakota	0			
SOUTH ATLANTIC	9,991			
Delaware	0			
District of Columbia	0			
Florida	0			
Georgia	0			
Maryland	8,453	X	X	X
North Carolina	1,452	X	X	X
South Carolina	0			
Virginia	0			
West Virginia	86			X
EAST SOUTH CENTRAL	132			
Alabama	0			
Kentucky	0			
Mississippi	0			
Tennessee	132	X	X	
WEST SOUTH CENTRAL	33			
Arkansas	0			
Louisiana	33		X	
Oklahoma	0			
Texas	0			
MOUNTAIN	3,642			
Arizona	2,800	X	X	
Colorado	50	X	X	X
Idaho	0			
Montana	165		X	X
Nevada	0			
New Mexico	339	X	X	
Utah	288		X	
Wyoming	0			
PACIFIC	30,849			
Alaska	0			
California	942	X	X	X
Hawaii	29,904	X	X	X
Oregon	0			
Washington	3			X
TERRITORIES	0			
Guam	0			
Puerto Rico	0			
Virgin Islands	0			

* New York did not report for fiscal year 1988.
 NOTE: NA = Data not available.

TABLE 46. ENVIRONMENTAL CHEMISTRY-Air Pollution Samples

Lab & Region	Number of Samples	Type of activity							Number of Continuous Sampling Stations
		Discrete Sampling Stations							
		Number of Stations	Solids	Metals	Organics	Other	Gaseous		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(10)	
TOTAL	290,097	375	14	15	5	6	4	169	
AVERAGE	18,131								
NEW ENGLAND	53,685								
Connecticut	7,685	49	X	X		X		28	
Massachusetts	0								
Maine	0								
New Hampshire	0								
Rhode Island	46,000	12	X	X			X	5	
Vermont	0								
MIDDLE ATLANTIC	0								
New Jersey	0								
New York*	0								
Pennsylvania	0								
EAST NORTH CENTRAL	0								
Illinois	0								
Indiana	0								
Michigan	0								
Ohio	NA	0	X	X	X			NA	
Wisconsin	0								
WEST NORTH CENTRAL	189,810								
Iowa	186,256	52	X	X				13	
Kansas	1,586	33	X	X				0	
Minnesota	0								
Missouri	0								
Nebraska	0								
North Dakota	0								
South Dakota	1,968	23	X	X				0	
SOUTH ATLANTIC	7,639								
Delaware	0								
District of Columbia	0								
Florida	0								
Georgia	0								
Maryland	7,639	28	X	X	X	X	X	61	
North Carolina	0								
South Carolina	0								
Virginia	0								
West Virginia	0								
EAST SOUTH CENTRAL	1,296								
Alabama	0								
Kentucky	0								
Mississippi	0								
Tennessee	1,296	NA	X	X	X	X		NA	
WEST SOUTH CENTRAL	0								
Arkansas	0								
Louisiana	0								
Oklahoma	0								
Texas	0								
MOUNTAIN	29,776								
Arizona	0								
Colorado	18,341	40	X	X				0	
Idaho	1,854	33	X	X					
Montana	4,619	64	X	X				13	
Nevada	10	1		X		X			
New Mexico	4,950	NA	X	X				45	
Utah	2	NA			X				
Wyoming	0								
PACIFIC	7,891								
Alaska	0								
California	3,251	25	X	X	X	X	X	0	
Hawaii	4,640	15	X	X		X	X	4	
Oregon	0								
Washington	0								
TERRITORIES	0								
Guam	0								
Puerto Rico	0								
Virgin Islands	0								

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 47. ENVIRONMENTAL CHEMISTRY-Solid and Hazardous Waste Samples

Lab & Region	Number of Samples	Type of substance identified			
		Synthetic Organic Chemicals	Insecticides and Herbicides	Inorganic Chemicals	Radionuclides
(1)	(2)	(3)	(4)	(5)	(6)
TOTAL	43,110	19	17	20	8
AVERAGE	2,053				
NEW ENGLAND	3,158				
Connecticut	2,974	X	X	X	
Massachusetts	0				
Maine	151	X	X	X	X
New Hampshire	0				
Rhode Island	33	X			
Vermont	0				
MIDDLE ATLANTIC	2,281				
New Jersey	2,281	X	X	X	
New York*					
Pennsylvania	0				
EAST NORTH CENTRAL	78				
Illinois	0				
Indiana	78	X	X	X	
Michigan	0				
Ohio	NA	X	X	X	
Wisconsin	0				
WEST NORTH CENTRAL	5,321				
Iowa	1,608	X	X	X	X
Kansas	1,230	X	X	X	X
Minnesota	2,218	X		X	
Missouri	0				
Nebraska	0				
North Dakota	185	X	X	X	X
South Dakota	82			X	
SOUTH ATLANTIC	20,848				
Delaware	0				
District of Columbia	0				
Florida	0				
Georgia	0				
Maryland	19,311	X	X	X	X
North Carolina	1,537	X	X	X	X
South Carolina	0				
Virginia	0				
West Virginia	0				
EAST SOUTH CENTRAL	921				
Alabama	0				
Kentucky	0				
Mississippi	0				
Tennessee	921				
WEST SOUTH CENTRAL	1,800				
Arkansas	0				
Louisiana	0				
Oklahoma	0				
Texas	1,800	X	X	X	X
MOUNTAIN	6,743				
Arizona	1,860	X	X	X	
Colorado	3,737	X	X	X	X
Idaho	29			X	
Montana	161	X	X	X	
Nevada	0				
New Mexico	507	X	X	X	
Utah	449	X	X	X	
Wyoming	0				
PACIFIC	1,960				
Alaska	0				
California	1,960	X	X	X	
Hawaii	0				
Oregon	0				
Washington	0				
TERRITORIES	0				
Guam	0				
Puerto Rico	0				
Virgin Islands	0				

* New York did not report for fiscal year 1988.
 NOTE: NA = Data not available.

TABLE 48. ENVIRONMENTAL CHEMISTRY-Food Samples

Lab & Region	Number of Samples	Type of substance identified			
		Synthetic Organic Chemicals	Insecticides and Herbicides	Inorganic Chemicals	Radionuclides
(1)	(2)	(3)	(4)	(5)	(6)
TOTAL	44,363	24	22	24	6
AVERAGE	1,530				
NEW ENGLAND	6,997				
Connecticut	3,877	X	X	X	
Massachusetts	801	X	X	X	
Maine	223	X	X	X	X
New Hampshire	9	X		X	
Rhode Island	2,087	X	X	X	
Vermont	0				
MIDDLE ATLANTIC	720				
New Jersey	720	X	X	X	
New York*					
Pennsylvania	0				
EAST NORTH CENTRAL	1,504				
Illinois	509	X	X	X	
Indiana	995	X	X	X	
Michigan	0				
Ohio	0				
Wisconsin	0				
WEST NORTH CENTRAL	6,796				
Iowa	0				
Kansas	13	X	X		X
Minnesota	0				
Missouri	6,318	X	X	X	
Nebraska	0				
North Dakota	467	X	X	X	X
South Dakota	0				
SOUTH ATLANTIC	12,013				
Delaware	0				
District of Columbia	82	X		X	
Florida	43	X	X	X	
Georgia	0				
Maryland	11,814	X	X	X	X
North Carolina	0				
South Carolina	0				
Virginia	0				
West Virginia	74			X	
EAST SOUTH CENTRAL	866				
Alabama	0				
Kentucky	866		X	X	
Mississippi	0				
Tennessee	0				
WEST SOUTH CENTRAL	10,021				
Arkansas	708	X	X		
Louisiana	8,153	X	X	X	X
Oklahoma	0				
Texas	1,160	X	X	X	X
MOUNTAIN	986				
Arizona	20	X	X	X	
Colorado	755	X	X	X	
Idaho	101			X	
Montana	4	X			
Nevada	0				
New Mexico	85	X	X	X	
Utah	21	X	X	X	
Wyoming	0				
PACIFIC	3,838				
Alaska	0				
California	3,465	X	X	X	
Hawaii	343	X	X		
Oregon	0				
Washington	30			X	
TERRITORIES	622				
Guam	0				
Puerto Rico	622				
Virgin Islands	0				

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 49. ENVIRONMENTAL CHEMISTRY-Body Tissue and Fluid Samples

Lab & Region	Number of Samples	Type of substance identified	
		Organic Chemicals	Inorganic Chemicals
(1)	(2)	(3)	(4)
TOTAL	2,221	9	6
AVERAGE	202		
NEW ENGLAND	373		
Connecticut	0		
Massachusetts	373	X	
Maine	0		
New Hampshire	0		
Rhode Island	0		
Vermont	0		
MIDDLE ATLANTIC	0		
New Jersey	0		
New York*			
Pennsylvania	0		
EAST NORTH CENTRAL	624		
Illinois	0		
Indiana	1	X	
Michigan	623	X	X
Ohio	0		
Wisconsin	0		
WEST NORTH CENTRAL	606		
Iowa	570	X	X
Kansas	0		
Minnesota	0		
Missouri	0		
Nebraska	0		
North Dakota	36		X
South Dakota	0		
SOUTH ATLANTIC	0		
Delaware	0		
District of Columbia	0		
Florida	0		
Georgia	0		
Maryland	0		
North Carolina	0		
South Carolina	0		
Virginia	0		
West Virginia	0		
EAST SOUTH CENTRAL	14		
Alabama	0		
Kentucky	14	X	
Mississippi	0		
Tennessee	0		
WEST SOUTH CENTRAL	0		
Arkansas	0		
Louisiana	0		
Oklahoma	0		
Texas	0		
MOUNTAIN	536		
Arizona	120		X
Colorado	0		
Idaho	0		
Montana	0		
Nevada	0		
New Mexico	142	X	X
Utah	274	X	X
Wyoming	0		
PACIFIC	68		
Alaska	0		
California	4	X	
Hawaii	0		
Oregon	0		
Washington	64	X	
TERRITORIES	0		
Guam	0		
Puerto Rico	0		
Virgin Islands	0		

* New York did not report for fiscal year 1988.
 NOTE: NA = Data not available.

TABLE 50. ENVIRONMENTAL CHEMISTRY-Radiological Analysis Samples

Lab & Region	Number of Samples	Type of sample							
		Air	Water	Milk	Food	Silt	Soil	Wipes from Instruments	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
TOTAL	44,140	20	26	19	17	15	22	20	
AVERAGE	1,635								
NEW ENGLAND	6,739								
Connecticut	521	X	X	X	X		X	X	Charcoal filters, fish
Massachusetts	712	X	X	X	X		X		
Maine	4,485	X	X	X	X	X	X	X	Seaweed
New Hampshire	0								
Rhode Island	287	X						X	
Vermont	734	X	X	X	X	X	X	X	
MIDDLE ATLANTIC	0								
New Jersey	0								
New York*									
Pennsylvania	0								
EAST NORTH CENTRAL	10,846								
Illinois	0								
Indiana	0								
Michigan	4,250	X	X	X			X	X	Contamination wipes, recovered sources
Ohio	2,675		X	X	X	X	X		
Wisconsin	3,921	X	X	X	X	X	X	X	Sludge, vegetation
WEST NORTH CENTRAL	6,792								
Iowa	1,535	X	X	X	X	X	X	X	Fish tissue
Kansas	1,848	X	X	X	X		X	X	Biota, fish, algae, hospital effluents, swab, vegetation, root aquatic
Minnesota	537		X	X	X		X	X	
Missouri	170		X					X	
Nebraska	2,085	X	X	X	X	X	X	X	
North Dakota	224	X	X	X	X	X	X	X	
South Dakota	393		X			X	X		
SOUTH ATLANTIC	7,971								
Delaware	158		X						
District of Columbia	0								
Florida	0								
Georgia	0								
Maryland	4,490	X	X	X	X	X	X	X	
North Carolina	3,323	X	X	X	X	X	X	X	
South Carolina	0								
Virginia	0								
West Virginia	0								
EAST SOUTH CENTRAL	1,251								
Alabama	0								
Kentucky	0								
Mississippi	0								
Tennessee	1,251	X	X	X		X	X	X	Vegetation
WEST SOUTH CENTRAL	2,995								
Arkansas	785	X	X	X	X	X	X	X	
Louisiana	0								
Oklahoma	0								
Texas	2,210	X	X	X	X	X	X	X	Vegetation
MOUNTAIN	2,952								
Arizona	0								
Colorado	1,047		X						
Idaho	93		X						
Montana	0								
Nevada	0								
New Mexico	970	X	X				X	X	Radon by charcoal canister
Utah	842	X	X				X		
Wyoming	0								
PACIFIC	4,594								
Alaska	0								
California	2,926	X	X	X	X	X	X	X	
Hawaii	0								
Oregon	0								
Washington	1,668	X	X	X	X	X	X	X	Wipes from "NRC" - state invest. thermoluminescent dosimeters
TERRITORIES	0								
Guam	0								
Puerto Rico	0								
Virgin Islands	0								

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 51. ENVIRONMENTAL CHEMISTRY-Other Environmental Chemistry Samples

Lab & Region	Number of Samples	Type of sample
(1)	(2)	(3)
TOTAL	52,073	
AVERAGE	2,367	
NEW ENGLAND	1,135	
Connecticut	1,134	Sewage/sludge, environ. misc., green powder, rug, wood chips, filter wipes
Massachusetts	0	
Maine	0	
New Hampshire	1	Bubble bath
Rhode Island	0	
Vermont	0	
MIDDLE ATLANTIC	1,759	
New Jersey	1,759	Fish & shellfish for pesticides/PCBs; fish for hydrocarbons; milk & dairy for conformance to standards
New York*		
Pennsylvania	0	
EAST NORTH CENTRAL	1,901	
Illinois	191	Quality assurance and miscellaneous samples
Indiana	1,710	Meat & meat-related products; other foods; bedding samples
Michigan	0	
Ohio	0	
Wisconsin	0	
WEST NORTH CENTRAL	8,217	
Iowa	1,911	Environmental microbiology
Kansas	310	Quality assurance
Minnesota	0	
Missouri	0	
Nebraska	0	
North Dakota	5,862	Annual feed, fertilizer, petroleum
South Dakota	334	Soil, water - petroleum
SOUTH ATLANTIC	1,058	
Delaware	0	
District of Columbia	0	
Florida	0	
Georgia	0	
Maryland	211	Needles
North Carolina	774	Isocyanates, ozone, benzidines, silica, cotton dust weight
South Carolina	71	Malathion droplet measurement for standardization of spraying machines
Virginia	0	
West Virginia	0	
EAST SOUTH CENTRAL	769	
Alabama	0	
Kentucky	552	Milk and other samples for pesticides
Mississippi	0	
Tennessee	217	Fish tissue
WEST SOUTH CENTRAL	25	
Arkansas	0	
Louisiana	25	Sands
Oklahoma	0	
Texas	0	
MOUNTAIN	1,910	
Arizona	0	
Colorado	1,174	Lead in toys; ceramic dinnerware; toy safety; misc.
Idaho	0	
Montana	0	
Nevada	491	Butterfat analysis
New Mexico	0	
Utah	245	Bulk and air asbestos, bulk and air SiO2
Wyoming	0	
PACIFIC	7,458	
Alaska	0	
California	3,039	Gasoline additives (Pb, Mn, S, P), microscopy, drugs
Hawaii	574	Butterfat (milk, ice milk), waste water TSS, sewage effluent, histamine, food components, sediments, NDES
Oregon	0	
Washington	3,845	Drinking water samples for inorganics and VOC's
TERRITORIES	27,843	
Guam	0	
Puerto Rico	27,843	Raw & pasteurized milk samples and milk products (natural organic chemicals)
Virgin Islands	0	

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 52. OCCUPATIONAL SAFETY AND HEALTH-Environmental Samples

Lab & Region (1)	Total Environmental Samples (2)	Type of sample	
		Asbestos (3)	Other (4)
TOTAL	222,583	64,665	157,918
AVERAGE	7,949	2,395	6,868
NEW ENGLAND	5,781	4,787	994
Connecticut	4,716	4,008	708
Massachusetts	0		
Maine	568	541	25
New Hampshire	241	188	55
Rhode Island	165	23	142
Vermont	93	29	64
MIDDLE ATLANTIC	4,611	3,588	1,023
New Jersey	4,611	3,588	1,023
New York*			
Pennsylvania	0		
EAST NORTH CENTRAL	165,619	28,919	136,700
Illinois	16,802	16,802	0
Indiana	0		
Michigan	1,400	900	500
Ohio	478	30	448
Wisconsin	146,941	11,187	135,754
WEST NORTH CENTRAL	7,657	6,742	1,915
Iowa	5,451	5,278	173
Kansas	639	7	632
Minnesota	1,400	300	1,100
Missouri	85	85	0
Nebraska	72	72	0
North Dakota	10	0	10
South Dakota	0		
SOUTH ATLANTIC	25,345	12,931	12,414
Delaware	0		
District of Columbia	0		
Florida	577	435	142
Georgia	0		
Maryland	14,858	4,500	10,358
North Carolina	198	118	78
South Carolina	9,689	7,853	1,836
Virginia	0		
West Virginia	25	25	0
EAST SOUTH CENTRAL	2,383	472	1,891
Alabama	0		
Kentucky	2,079	188	1,891
Mississippi	0		
Tennessee	284	284	NA
WEST SOUTH CENTRAL	10,050	7,735	2,315
Arkansas	375	375	0
Louisiana	0		
Oklahoma	0		
Texas	9,675	7,360	2,315
MOUNTAIN	925	473	452
Arizona	600	150	450
Colorado	325	323	2
Idaho	0		
Montana	0		
Nevada	0		
New Mexico	0		
Utah	0		
Wyoming	0		
PACIFIC	232	18	214
Alaska	0		
California	232	18	214
Hawaii	0		
Oregon	0		
Washington	0		
TERRITORIES	0		
Guam	0		
Puerto Rico	0		
Virgin Islands	0		

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 53. TOXICOLOGY-Physical Samples

Lab & Region	Number of Samples	Type of sample						
		Liquids for Alcohol	Pesticides	PCB's	Plant and Plant Materials (include Marijuana)	Drugs and Narcotics	Articles for Blood Stains	Paint - Comparison
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
TOTAL	153,917							
AVERAGE	5,497							
NEW ENGLAND	107,726							
Connecticut	62,039	F			F	F	F	
Massachusetts	36,236	F/O			F/O	F		
Maine	436	F	F	F	F	F		
New Hampshire	315	F/O				F		
Rhode Island	8,658	F/O	O	O	F/O	F/O	F	
Vermont	42	F						
MIDDLE ATLANTIC	176							
New Jersey	169					O		
New York*								
Pennsylvania	7	O				O		
EAST NORTH CENTRAL	3,757							
Illinois	0							
Indiana	189				O	O	O	
Michigan	41		O					
Ohio	3,417	F/O	F/O	F/O	F/O	F/O		
Wisconsin	110	F/O		O	O	O		O
WEST NORTH CENTRAL	7,166							
Iowa	0							
Kansas	0							
Minnesota	0							
Missouri	0							
Nebraska	0							
North Dakota	6,585	F	F		F	F	F	F
South Dakota	581	F			F			
SOUTH ATLANTIC	7,937							
Delaware	0							
District of Columbia	161							
Florida	0							
Georgia	0							
Maryland	6,390				F	F	F	
North Carolina	116		O	O				
South Carolina	1,270		O	O		O		O
Virginia	0							
West Virginia	0							
EAST SOUTH CENTRAL	265							
Alabama	0							
Kentucky	265	F/O	F/O	F/O	F	F		
Mississippi	0							
Tennessee	0							
WEST SOUTH CENTRAL	65							
Arkansas	0							
Louisiana	65					O		
Oklahoma	0							
Texas	0							
MOUNTAIN	9,132							
Arizona	0							
Colorado	0							
Idaho	8,995		O	O	F	F	F	F
Montana	14							
Nevada	0							
New Mexico	43	F				F	F	
Utah	80	F			F	F		F
Wyoming	0							
PACIFIC	3,069							
Alaska	0							
California	1,778	F	O	O		O		
Hawaii	1,289					O		
Oregon	0							
Washington	2							
TERRITORIES	14,624							
Guam	0							
Puerto Rico	0							
Virgin Islands	14,624					O		

* New York did not report for fiscal year 1988.

NOTE: F = Forensic, O = Other.

TABLE 53. TOXICOLOGY-Physical Samples (continued)

Lab & Region	Number of Samples	Type of sample				Other (13)
		Paint - Lead (10)	Fibers and Hairs (11)	Gunpowder Residues (12)		
TOTAL	153,917					
AVERAGE	5,497					
NEW ENGLAND	107,726					
Connecticut	62,039	O	F	F	F - Fire accelerants, clothing for seminal stains, other volatiles	
Massachusetts	36,238	O			O - glassware, pottery-lead, water-lead	
Maine	436	F			Arson	
New Hampshire	315	O			O - Soil, decorative glasses-lead; earthenware-lead, cadmium; toys-metals	
Rhode Island	8,658	O			F/O - Materials containing dangerous substances, poisons, street drugs, diluents	
Vermont	42	O				
MIDDLE ATLANTIC	176					
New Jersey	169	O				
New York*						
Pennsylvania	7				O - Water (lead)	
EAST NORTH CENTRAL	3,757					
Illinois	0					
Indiana	189	O			O - Soil (lead)	
Michigan	41				O - Soil, air, dust/powder, empty containers, hydraulic oil	
Ohio	3,417					
Wisconsin	110				O - Soil, solder-lead; hair-arsenic	
WEST NORTH CENTRAL	7,166					
Iowa	0					
Kansas	0					
Minnesota	0					
Missouri	0					
Nebraska	0					
North Dakota	6,585	F	F	F	Firearms & tool marks, arson accelerants, glass & trace evidence, Latent fingerprints, shoe & tire impressions	
South Dakota	581					
SOUTH ATLANTIC	7,937					
Delaware	0					
District of Columbia	161	O				
Florida	0					
Georgia	0					
Maryland	6,390	O			O - Ceramics (lead, carnium), dust & toys (lead, quantitative), paint (lead, qualitative)	
North Carolina	116	O				
South Carolina	1,270					
Virginia	0					
West Virginia	0					
EAST SOUTH CENTRAL	265					
Alabama	0					
Kentucky	265	O			O - Petroleum distillates (food and soft drinks), lead (toys), sulfites	
Mississippi	0					
Tennessee	0					
WEST SOUTH CENTRAL	65					
Arkansas	0					
Louisiana	65	O				
Oklahoma	0					
Texas	0					
MOUNTAIN	9,132					
Arizona	0					
Colorado	0					
Idaho	8,995	F	F	F	O-petroleum products, volatile organic compounds; F-arson, firearms, misc.	
Montana	14	O				
Nevada	0					
New Mexico	43					
Utah	80					
Wyoming	0					
PACIFIC	3,069					
Alaska	0					
California	1,778				O - Soil (lead), mutagenicity, dioxin, furans	
Hawaii	1,289					
Oregon	0					
Washington	2	O				
TERRITORIES	14,624					
Guam	0					
Puerto Rico	0					
Virgin Islands	14,624					

* New York did not report for fiscal year 1988.

NOTE: F = Forensic, O = Other.

***OTHER
LABORATORY
WORKLOADS***

TABLE 54. LABORATORY IMPROVEMENT PROGRAM-Number of Laboratories and LIP Personnel

Lab & Region	Number of Professional/ Technical and Non-Technical Positions in LIP	Type of lab			
		Clinical	Public Health	Dairy and Food	Water
(1)	(2)	(3)	(4)	(5)	(6)
TOTAL	195.75	19,305	427	422	2,773
AVERAGE	5.29	623	12	18	89
NEW ENGLAND	13.70	542	150	58	169
Connecticut	11.00	166	148	25	118
Massachusetts	0.00	1,071	NA	29	NA
Maine	1.10	270	1	NA	25
New Hampshire	0.10	NA	NA	1	NA
Rhode Island	1.00	69	0	1	16
Vermont	0.50	37	1	2	10
MIDDLE ATLANTIC	39.00	6,760	3	0	0
New Jersey	20.00	550	NA	NA	NA
New York*					
Pennsylvania	19.00	6,200	3	NA	NA
EAST NORTH CENTRAL	27.50	1,211	57	116	908
Illinois	7.00	NA	NA	NA	NA
Indiana	2.00	NA	6	NA	NA
Michigan	10.00	411	32	NA	NA
Ohio	5.00	NA	NA	NA	470
Wisconsin	3.50	800	19	116	438
WEST NORTH CENTRAL	14.60	995	33	50	317
Iowa	1.00	161	8	26	NA
Kansas	8.00	NA	1	NA	NA
Minnesota	0.00	695	6	NA	250
Missouri	3.00	NA	7	NA	NA
Nebraska	0.20	1	4	NA	13
North Dakota	1.00	63	4	12	41
South Dakota	1.40	75	3	12	13
SOUTH ATLANTIC	35.40	769	29	51	382
Delaware	0.40	25	3	1	6
District of Columbia	0.00	NA	NA	NA	0
Florida	NA	NA	NA	NA	220
Georgia	0.00	NA	NA	NA	NA
Maryland	14.00	399	7	25	75
North Carolina	11.00	NA	NA	NA	NA
South Carolina	3.00	NA	5	8	NA
Virginia	NA	NA	11	17	81
West Virginia	7.00	345	3	NA	NA
EAST SOUTH CENTRAL	4.25	1,443	16	78	212
Alabama	2.00	126	10	6	24
Kentucky	2.25	1,117	3	34	NA
Mississippi	0.00	200	3	NA	12
Tennessee	0.00	NA	NA	38	176
WEST SOUTH CENTRAL	3.30	1,550	37	19	72
Arkansas	3.00	150	1	NA	NA
Louisiana	0.00	NA	7	NA	16
Oklahoma	0.30	NA	3	NA	NA
Texas	0.00	1,400	26	19	58
MOUNTAIN	19.20	1,185	36	32	237
Arizona	8.00	227	21	NA	57
Colorado	0.00	0	0	8	68
Idaho	4.00	270	6	14	29
Montana	0.20	NA	NA	NA	16
Nevada	0.00	NA	NA	4	11
New Mexico	1.00	130	3	5	41
Utah	5.00	300	5	NA	NA
Wyoming	1.00	258	1	1	15
PACIFIC	37.80	4,325	62	8	461
Alaska	0.80	42	3	3	20
California	36.00	4,050	58	NA	360
Hawaii	0.00	70	1	8	14
Oregon	1.00	205	3	NA	40
Washington	0.00	NA	NA	NA	47
TERRITORIES	1.00	535	4	12	15
Guam	0.00	NA	NA	NA	NA
Puerto Rico	1.00	534	3	12	15
Virgin Islands	0.00	1	1	NA	NA

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 55. LABORATORY IMPROVEMENT PROGRAM-Clinical Laboratories

Lab & Region	Number of Labs in State	Number of Labs Licensed/Registered/Approved/Certified by State	Number by LIP				Other	Other Agency or Department Responsible for Licensing, Registering, Approving, Certifying Laboratories
			Licensed/Permit/Approved	Registered	Certified			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
TOTAL	20,531	15,663	12,553	82	1,690			
AVERAGE	587	448	546	41	113			
NEW ENGLAND	1,813	854	283	0	67			
Connecticut	166	198	198	0	0	29 BI, banks, 105 bl, drawing facil.		
Massachusetts	1,071	521					Div. of Health Care Quality, MA Dept. of Public Health	
Maine	270	66	16	0	18	48 labs not routinely surv. by LIP	JCAH, AOA, CAP	
New Hampshire	NA						Bureau of Health Facilities Administration	
Rhode Island	89	69	69	0	49			
Vermont	37							
MIDDLE ATLANTIC	6,750	5,950	5,950	0	387			
New Jersey	550	550	550	0	120			
New York*								
Pennsylvania	6,200	5,400	5,400	0	267	97 CLIA		
EAST NORTH CENTRAL	1,211	1,726	1,363	0	536			
Illinois	NA	523	525	0	0			
Indiana	NA	NA	0	0	152		Respons. between Lab Support Div. & Div. of Acute Care Svcs.	
Michigan	411	408	408	0	121	27 non-clinical, non-public health labs registered to handle pathogens		
Ohio	NA	365	0	0	263			
Wisconsin	800	430	430	0	0		Sect. of Lab Cert., Bur. of Prevention, WI Div. of Health	
WEST NORTH CENTRAL	1,108	713	328	0	141			
Iowa	161	181	0	0	88			
Kansas	NA	240	178	0	53	9 POLs (state syph. serology app.)		
Minnesota	695	NA					Div. of Health Systems, Survey and Compliance, MN Dept. of Health	
Missouri	NA	250	150	0	0			
Nebraska	114	62					Division of Licensure and Standards	
North Dakota	63	0						
South Dakota	75	0					South Dakota Dept. of Health, Division of Public Health	
SOUTH ATLANTIC	769	796	477	0	238			
Delaware	25	15	15	0	0			
District of Columbia	NA	NA					Dept. of Consumer and Regulatory Affairs	
Florida	NA	NA					HRS Office of Licensure and Certification	
Georgia	NA	NA					Lab Lic. & Devel., Off. of Reg. Svcs., GA Dept. of Human Res.	
Maryland	399	444	308	0	114	96 POLs labs granted exceptions to permit requirement		
North Carolina	NA	NA					Division of Facility Services - N.C. Dept. of Human Resources	
South Carolina	NA	105	0	0	0		Bureau of Licensing & Certification, Dept. of Health	
Virginia	NA	NA	NA					
West Virginia	345	232	154	0	124			
EAST SOUTH CENTRAL	1,443	362	103	0	0			
Alabama	126	126						
Kentucky	1,117	103	103	0	0			
Mississippi	200	133						
Tennessee	NA							
WEST SOUTH CENTRAL	1,550	1,291	925	0	206			
Arkansas	150	85	85	0	0			
Louisiana	NA						Office of Licensing and Certification	
Oklahoma	NA	206	0	0	206			
Texas	1,400	1,000	840	0	0		Hospital and Professional Licensure Division	
MOUNTAIN	1,185	1,093	810	82	111			
Arizona	227	227	227	0	73			
Colorado	NA	NA					Lab Lic. specialist, CO Dept. of Health, Health Facilities Div.	
Idaho	270	270	220	22	38			
Montana	NA	60	0	60	0			
Nevada	NA	NA					Bureau of Regulatory Health Services, Carson City, NV	
New Mexico	130	124	105	0	0	36 labs insp. for Health and Env.		
Utah	300	154				78 - voluntary labs		
Wyoming	258	258	258	0	0			
PACIFIC	4,367	2,348	2,314	NA	4			
Alaska	42	30					Div. of Med. Assist., AK Dept. of Hlth & Soc. Svcs. resp. for CLIA	
California	4,050	2,041	2,041	0	0			
Hawaii	70	70	70	0	4			
Oregon	205	205	203	0	0			
Washington	NA	NA		NA			Laboratory QA, Office of Licensing and Certification	
TERRITORIES	535	532	0	0	0			
Guam	NA							
Puerto Rico	534	532					Asst. Secretariat for Reg. and Accreditation of Health Facil.	
Virgin Islands	1	0						

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 55. LABORATORY IMPROVEMENT PROGRAM-Clinical Laboratories-Activity of LIP Staff (continued)

Lab & Region	Proficiency Testing										
	Diagnostic Bacteriology	Mycology	Parasitology	Virology	Immunology		Hematology	Clinical Chemistry	Pathology	Env. Microbiology	Env. Chemistry
					Syphilis Serology	Non-Syphilis Serology					
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
TOTAL	19	13	17	7	31	17	17	17	2	3	4
NEW ENGLAND											
Connecticut	X	X	X	X	X	X	X	X			
Massachusetts											
Maine											
New Hampshire											
Rhode Island	X		X		X	X	X	X		X	X
Vermont											
MIDDLE ATLANTIC											
New Jersey	X	X	X	X	X	X	X	X	X		
New York*											
Pennsylvania	X	X	X	X	X	X	X	X			
EAST NORTH CENTRAL											
Illinois					X			X			
Indiana					X						
Michigan	X		X		X	X	X	X			
Ohio	X	X	X		X	X	X	X			
Wisconsin	X	X	X		X	X	X	X			
WEST NORTH CENTRAL											
Iowa	X	X	X		X	X	X	X			
Kansas	X	X	X	X	X	X	X	X			
Minnesota	X	X	X		X	X	X	X			
Missouri					X						
Nebraska											
North Dakota											
South Dakota											
SOUTH ATLANTIC											
Delaware					X						
District of Columbia											
Florida											
Georgia											
Maryland	X	X	X	X	X	X	X	X	X		X
North Carolina	X				X						
South Carolina	X	X	X		X						
Virginia					X						
West Virginia	X		X		X		X	X		X	X
EAST SOUTH CENTRAL											
Alabama					X						
Kentucky	X				X		X	X			
Mississippi					X						
Tennessee											
WEST SOUTH CENTRAL											
Arkansas	X	X	X		X						
Louisiana											
Oklahoma											
Texas										X	
MOUNTAIN											
Arizona											
Colorado											
Idaho	X		X		X	X	X	X			
Montana					X	X					
Nevada					X						
New Mexico					X	X					
Utah	X	X	X	X	X	X	X	X			
Wyoming					X	X	X				
PACIFIC											
Alaska					X						
California											
Hawaii											
Oregon											
Washington											
TERRITORIES											
Guam											
Puerto Rico	X	X	X	X	X	X	X	X			
Virgin Islands											

* New York did not report for fiscal year 1988.

TABLE 55. LABORATORY IMPROVEMENT PROGRAM-Clinical Laboratories-Activity of LIP Staff (continued)

Lab & Region (9)	Proficiency Testing (continued)		Field Visits - LIP Program		
	Dairy/ Food (21)	Other (22)	Licensed/ Permit/ Approved (23)	Certified (24)	Other (25)
TOTAL	3		22	10	
NEW ENGLAND					
Connecticut			X	X	Blood banks, blood collection facilities, QC research & training
Massachusetts					
Maine			X		
New Hampshire					
Rhode Island	X		X	X	
Vermont					
MIDDLE ATLANTIC					
New Jersey					
New York*					
Pennsylvania		HLA, immunohematology, toxicology	X		
EAST NORTH CENTRAL					
Illinois			X		
Indiana					
Michigan			X		
Ohio					
Wisconsin			X		
WEST NORTH CENTRAL					
Iowa					
Kansas			X		State hospital licensure in non-JCAHO facilities
Minnesota		Blood banking, urine chemistry			
Missouri	X				
Nebraska					
North Dakota					
South Dakota					
SOUTH ATLANTIC					
Delaware			X		2 labs covered by LIP
District of Columbia					
Florida					
Georgia					
Maryland			X	X	
North Carolina					
South Carolina					
Virginia			X		
West Virginia	X		X	X	
EAST SOUTH CENTRAL					
Alabama			X	X	
Kentucky					
Mississippi					
Tennessee					
WEST SOUTH CENTRAL					
Arkansas			X		
Louisiana					
Oklahoma				X	
Texas					
MOUNTAIN					
Arizona			X		
Colorado					
Idaho			X		
Montana					
Nevada		Urinalysis			
New Mexico			X		
Utah			X	X	voluntary
Wyoming			X		
PACIFIC					
Alaska					
California			X		
Hawaii				X	
Oregon			X	X	
Washington					Medicare/CLIA, testing public drinking water
TERRITORIES					
Guam					
Puerto Rico		Urinalysis, blood bank, immunohematology	X	X	
Virgin Islands					

* New York did not report for fiscal year 1988.

TABLE 55. LABORATORY IMPROVEMENT PROGRAM-Clinical Laboratories-Activity of LIP Staff (continued)

Lab & Region (9)	Field Visits - Other Programs		
	Licensed/ Permit/ Approved (26)	Certified (27)	Other (28)
TOTAL	11	15	
NEW ENGLAND			
Connecticut	X	X	
Massachusetts			
Maine		X	
New Hampshire			
Rhode Island	X	X	
Vermont			
MIDDLE ATLANTIC			
New Jersey			
New York*			
Pennsylvania	X	X	
EAST NORTH CENTRAL			
Illinois		X	
Indiana			
Michigan		X	
Ohio			
Wisconsin	X		
WEST NORTH CENTRAL			
Iowa	X	X	
Kansas	X	X	
Minnesota			
Missouri			
Nebraska			
North Dakota			
South Dakota			
SOUTH ATLANTIC			
Delaware	X	X	13 labs covered by other programs
District of Columbia			
Florida			
Georgia			
Maryland	X	X	
North Carolina			
South Carolina			
Virginia			
West Virginia			
EAST SOUTH CENTRAL			
Alabama			
Kentucky			
Mississippi			
Tennessee			
WEST SOUTH CENTRAL			
Arkansas			
Louisiana			
Oklahoma			
Texas			
MOUNTAIN			
Arizona			
Colorado			
Idaho		X	
Montana			
Nevada			
New Mexico	X	X	
Utah	X	X	
Wyoming			
PACIFIC			
Alaska			
California	X		
Hawaii			
Oregon		X	
Washington			
TERRITORIES			
Guam			
Puerto Rico		X	
Virgin Islands			

* New York did not report for fiscal year 1988.

TABLE 55. LABORATORY IMPROVEMENT PROGRAM-Clinical Laboratories-Activity of LIP Staff (continued)

Lab & Region (9)	Training (29)	Consultation (30)	Other (31)
TOTAL	29	31	
NEW ENGLAND			
Connecticut	X	X	
Massachusetts	X	X	
Maine	X	X	Review proficiency test results for all licensed and POLs
New Hampshire			
Rhode Island	X	X	
Vermont			
MIDDLE ATLANTIC			
New Jersey	X	X	
New York*			
Pennsylvania	X	X	Evaluation of correction plans, adverse actions necessary
EAST NORTH CENTRAL			
Illinois	X	X	
Indiana		X	
Michigan			
Ohio			
Wisconsin	X	X	
WEST NORTH CENTRAL			
Iowa			
Kansas	X	X	Proficiency test evaluations
Minnesota	X	X	
Missouri	X	X	
Nebraska			
North Dakota			
South Dakota			
SOUTH ATLANTIC			
Delaware	X	X	
District of Columbia			
Florida	X		
Georgia			
Maryland	X	X	
North Carolina	X	X	Newsletter
South Carolina	X	X	
Virginia			
West Virginia	X	X	
EAST SOUTH CENTRAL			
Alabama	X	X	
Kentucky	X	X	
Mississippi	X	X	
Tennessee			
WEST SOUTH CENTRAL			
Arkansas	X	X	
Louisiana			
Oklahoma		X	
Texas			
MOUNTAIN			
Arizona	X	X	
Colorado			
Idaho	X	X	Newsletter
Montana	X	X	
Nevada			
New Mexico	X	X	
Utah	X	X	Workshops
Wyoming		X	
PACIFIC			
Alaska	X	X	
California			
Hawaii		X	
Oregon			
Washington	X		
TERRITORIES			
Guam			
Puerto Rico	X	X	
Virgin Islands			

* New York did not report for fiscal year 1988.

TABLE 56. LABORATORY IMPROVEMENT PROGRAM-Public Health Laboratories

Lab & Region	Number of Labs in State	Number of Labs Licensed/Registered/Approved/Certified by State	Number by LIP				Other Agency or Department Responsible for Licensing, Registering, Approving, Certifying Laboratories
			Licensed/Permit/Approved	Registered	Certified	Other	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TOTAL	439	437	313	104	41		
AVERAGE	10	16	20	52	4		
NEW ENGLAND	150	178	178	46	0		
Connecticut	148	178	178	46	0	10 Dog labs	
Massachusetts	NA						Div. of Health Care Quality, MA Dept. of Public Health
Maine	1						JCAH, AOA, CAP
New Hampshire	NA						Bureau of Health Facilities Administration
Rhode Island	NA	NA					
Vermont	1						
MIDDLE ATLANTIC	4	3	2	0	2		
New Jersey	1	1					
New York*							
Pennsylvania	3	2	2	0	2		
EAST NORTH CENTRAL	65	47	39	0	13		
Illinois	NA	15	15	0	0		
Indiana	6	NA					Respons. between Lab Support Div. & Div. of Acute Care Svcs.
Michigan	32	9	9	0	5		
Ohio	8	8	0	0	8		
Wisconsin	19	15	15	0	0		Sect. of Lab Cert., Bur. of Prevention, WI Div. of Health
WEST NORTH CENTRAL	33	23	7	0	7		
Iowa	8	8					
Kansas	1	0					
Minnesota	6	NA					Div. of Health Systems, Survey and Compliance, MN Dept. of Health
Missouri	7	7	7	0	0		
Nebraska	4	4	0	0	3		
North Dakota	4	4	0	0	4		
South Dakota	3	0					SD Dept. of Health, Div. of Public Health
SOUTH ATLANTIC	29	8	7	0	3		
Delaware	3						
District of Columbia	NA	NA					Dept. of Consumer and Regulatory Affairs
Florida	NA	NA					HRS Office of Licensure and Certification
Georgia	NA	NA					Lab Lic. & Develop., Off. of Reg. Service, GA Dept. of Human Res.
Maryland	7	7	7	0	2		
North Carolina	NA	NA					Division of Facility Services - N.C. Dept. of Human Resources
South Carolina	5	1	0	0	0		Bureau of Licensing & Certification, Dept. of Health
Virginia	11	NA	NA	0	0		
West Virginia	3		0	0	1		
EAST SOUTH CENTRAL	16	16	8	0	0		
Alabama	10	10	5	0	0		All Pre-marital labs are certified by Lic. & Cert. Div. of State Hlth Dept.
Kentucky	3	3	3	0	0		Lic. & Regulation Div. respons. for lab lic. in accord with KY Medical Lab Act.
Mississippi	3	3					Lab services approve labs for performance of prenatal tests for syphilis.
Tennessee	NA					3 Enteric bacteriology	Health Facilities Licensure & Cert.
WEST SOUTH CENTRAL	37	45	25	0	10		Lab Licensing Svc., Bur. of Manpower and Facil., Dept. of Health and Env.
Arkansas	1	0					
Louisiana	7	16	0	0	7	10 private labs in water utility plants	
Oklahoma	3	3	0	0	3		
Texas	26	26	25	0	0		Hospital and Professional Licensure Division
MOUNTAIN	36	32	40	0	6		
Arizona	21	21	21	0	0		
Colorado	NA	NA					Lab Lic. specialist, CO Dept. of Health, Health Facil. Div.
Idaho	6	6	0	0	6		
Montana	NA	17	16	0	0		
Nevada	NA	NA					Bureau of Regulatory Health Services, Carson City, NV
New Mexico	3	3	3	0	0		
Utah	5	5					
Wyoming	1						
PACIFIC	65	62	4	58	0		
Alaska	3	0					Div. of Med. Assist., AK Dept. of Health & Soc. Svcs. respons. for CLIA.
California	58	58	0	58	0		
Hawaii	1	1	1	0	0		
Oregon	3	3	3	0	0		
Washington	NA	NA					Laboratory Quality Assurance, Office of Licensing and Certification
TERRITORIES	4	3	3	0	0		
Guam	NA						
Puerto Rico	3	3	3	0	0		
Virgin Islands	1	0					

* New York did not report for fiscal year 1988.
NOTE: NA = Data not available.

TABLE 56. LABORATORY IMPROVEMENT PROGRAM-Public Health Laboratories-Activity of LIP Staff (continued)

Lab & Region	Proficiency Testing										
	Diagnostic Bacteriology	Mycology	Parasitology	Virology	Immunology		Hematology	Clinical Chemistry	Pathology	Env. Microbiology	Env. Chemistry
					Syphilis Serology	Non-Syphilis Serology					
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
TOTAL	11	7	9	5	17	11	8	9	1	11	7
NEW ENGLAND											
Connecticut	X	X	X	X	X	X	X	X		X	X
Massachusetts											
Maine											
New Hampshire											
Rhode Island											
Vermont											
MIDDLE ATLANTIC											
New Jersey											
New York*											
Pennsylvania	X	X	X	X	X	X	X	X			
EAST NORTH CENTRAL											
Illinois					X			X			
Indiana											
Michigan											
Ohio						X					
Wisconsin	X	X	X		X	X					X
WEST NORTH CENTRAL											
Iowa											
Kansas											
Minnesota	X	X	X		X	X	X	X			
Missouri					X						
Nebraska										X	X
North Dakota										X	X
South Dakota											
SOUTH ATLANTIC											
Delaware											
District of Columbia											
Florida											
Georgia											
Maryland	X	X	X	X	X	X	X	X	X	X	X
North Carolina	X				X		X	X			
South Carolina											
Virginia					X						
West Virginia											
EAST SOUTH CENTRAL											
Alabama					X						
Kentucky	X				X		X	X			
Mississippi										X	
Tennessee											
WEST SOUTH CENTRAL											
Arkansas											
Louisiana										X	
Oklahoma											
Texas	X	X	X	X	X	X				X	
MOUNTAIN											
Arizona											
Colorado											
Idaho	X		X		X	X	X	X			
Montana										X	X
Nevada					X						
New Mexico					X	X					
Utah										X	X
Wyoming											
PACIFIC											
Alaska	X	X	X	X	X	X				X	
California											
Hawaii										X	
Oregon											
Washington											
TERRITORIES											
Guam											
Puerto Rico	X		X		X	X	X	X			
Virgin Islands											

* New York did not report for fiscal year 1988.

TABLE 56. LABORATORY IMPROVEMENT PROGRAM-Public Health Laboratories-Activity of LIP Staff (continued)

Lab & Region	Proficiency Testing (continued)		Field Visits - LIP Programs		
	Dairy/ Food (9)	Other (22)	Licensed/ Permit/ Approved (23)	Certified (24)	Other (25)
TOTAL	10		12	10	
NEW ENGLAND					
Connecticut	X				Dog Labs
Massachusetts					
Maine					
New Hampshire					
Rhode Island					
Vermont					
MIDDLE ATLANTIC					
New Jersey				X	
New York*					
Pennsylvania		HLA, immunohematology	X		
EAST NORTH CENTRAL					
Illinois					
Indiana	X				
Michigan			X		
Ohio					
Wisconsin	X		X		
WEST NORTH CENTRAL					
Iowa					
Kansas					
Minnesota					
Missouri	X				
Nebraska				X	
North Dakota				X	
South Dakota					
SOUTH ATLANTIC					
Delaware					
District of Columbia					
Florida					
Georgia					
Maryland	X		X	X	
North Carolina	X				
South Carolina					
Virginia	X		X		Certification of veterinary labs in Dept. of Agriculture & Consumer Affairs
West Virginia					
EAST SOUTH CENTRAL					
Alabama	X		X	X	
Kentucky					
Mississippi					
Tennessee					
WEST SOUTH CENTRAL					
Arkansas					
Louisiana	X	Shellfish labs		X	Private labs in water utility plants, shellfish labs
Oklahoma				X	
Texas					
MOUNTAIN					
Arizona			X		
Colorado					
Idaho					
Montana			X		
Nevada		Urinalysis			
New Mexico					
Utah				X	
Wyoming					
PACIFIC					
Alaska	X				
California			X		
Hawaii		Shellfish	X	X	
Oregon			X	X	
Washington					Testing public drinking water
TERRITORIES					
Guam					
Puerto Rico		Urinalysis, immunohematology	X		
Virgin Islands					

* New York did not report for fiscal year 1988.

TABLE 56. LABORATORY IMPROVEMENT PROGRAM-Public Health Laboratories-Activity of LIP Staff (continued)

Lab & Region	Field Visits - Other Programs		
	Licensed/ Permit/ Approved	Certified	Other
(9)	(26)	(27)	(28)
TOTAL	4	10	
NEW ENGLAND			
Connecticut			
Massachusetts			
Maine			
New Hampshire			
Rhode Island			
Vermont			
MIDDLE ATLANTIC			
New Jersey		X	
New York*			
Pennsylvania		X	
EAST NORTH CENTRAL			
Illinois			
Indiana			
Michigan		X	
Ohio			
Wisconsin	X		
WEST NORTH CENTRAL			
Iowa			
Kansas			
Minnesota			
Missouri			
Nebraska			
North Dakota			
South Dakota			
SOUTH ATLANTIC			
Delaware			
District of Columbia			
Florida			
Georgia			
Maryland	X	X	
North Carolina			
South Carolina			
Virginia			
West Virginia			
EAST SOUTH CENTRAL			
Alabama			
Kentucky			
Mississippi			
Tennessee			
WEST SOUTH CENTRAL			
Arkansas			
Louisiana		X	Private labs in water utility plants, shellfish labs
Oklahoma	X	X	
Texas			
MOUNTAIN			
Arizona		X	
Colorado			
Idaho		X	
Montana			
Nevada			
New Mexico			
Utah		X	
Wyoming			
PACIFIC			
Alaska			
California	X		
Hawaii			
Oregon		X	
Washington			
TERRITORIES			
Guam			
Puerto Rico			
Virgin Islands			

* New York did not report for fiscal year 1988.

TABLE 56. LABORATORY IMPROVEMENT PROGRAM-Public Health Laboratories-Activity of LIP Staff (continued)

Lab & Region (9)	Training (29)	Consultation (30)	Other (31)
TOTAL	27	25	
NEW ENGLAND			
Connecticut	X	X	
Massachusetts	X	X	
Maine	X	X	
New Hampshire			
Rhode Island			
Vermont			
MIDDLE ATLANTIC			
New Jersey			
New York*			
Pennsylvania	X	X	Evaluation of correction plans, adverse actions necessary
EAST NORTH CENTRAL			
Illinois	X	X	
Indiana			
Michigan			
Ohio			
Wisconsin	X	X	
WEST NORTH CENTRAL			
Iowa			
Kansas			
Minnesota	X	X	
Missouri	X	X	
Nebraska			
North Dakota	X	X	
South Dakota			
SOUTH ATLANTIC			
Delaware	X	X	
District of Columbia			
Florida	X		
Georgia			
Maryland	X	X	
North Carolina	X	X	Newsletter, On-site review for local health dept. laboratory standards
South Carolina	X	X	
Virginia			
West Virginia			
EAST SOUTH CENTRAL			
Alabama	X	X	
Kentucky	X	X	
Mississippi	X	X	
Tennessee			
WEST SOUTH CENTRAL			
Arkansas			
Louisiana	X	X	
Oklahoma	X	X	
Texas			
MOUNTAIN			
Arizona	X	X	
Colorado			
Idaho	X	X	
Montana	X	X	
Nevada			
New Mexico	X	X	
Utah	X	X	Workshops
Wyoming			
PACIFIC			
Alaska	X	X	
California			
Hawaii			
Oregon			
Washington	X		
TERRITORIES			
Guam			
Puerto Rico			
Virgin Islands	X	X	

* New York did not report for fiscal year 1988.

TABLE 57. LABORATORY IMPROVEMENT PROGRAM-Dairy and Food Laboratories

Lab & Region	Number of Labs in State	Number of Labs Licensed/Registered/ Approved/Certified by State	Number by LIP			Other Agency or Department Responsible for Licensing, Registering, Approving, Certifying Laboratories
			Licensed/ Permit/ Approved	Registered	Certified	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
TOTAL	425	834	364	20	376	
AVERAGE	17	31	36	20	22	
NEW ENGLAND	58	56	26	0	2	
Connecticut	25	25	25	0	0	
Massachusetts	29	29	0	0	0	State Food Laboratory
Maine	NA	NA				Dept. of Agriculture
New Hampshire	1	1	0	0	1	
Rhode Island	1	1	1	0	1	
Vermont	2	0				VT Dept. of Agriculture
MIDDLE ATLANTIC	NA	10	10	10	10	
New Jersey	NA	10	10	10	10	Separate from Clinical Lab Improvement Service- assigned to Bacteriology
New York*						
Pennsylvania	NA	NA				PA Dept. of Agriculture
EAST NORTH CENTRAL	116	179	127	0	52	
Illinois	NA	30	0	0	30	
Indiana	NA	22	0	0	22	
Michigan	NA	NA				MI Dept. of Agriculture
Ohio	NA	11	11	0	0	
Wisconsin	116	116	116	0	0	
WEST NORTH CENTRAL	50	57	9	0	2	
Iowa	26	24				IA Dept. of Agriculture
Kansas	NA	NA				State Board of Agriculture
Minnesota	NA	NA				Dept. of Agriculture
Missouri	NA	9	9	0	0	
Nebraska	NA	NA				Division of Licensure and Standards
North Dakota	12	12	0	0	2	
South Dakota	12	12				State Dairy Laboratory, South Dakota University
SOUTH ATLANTIC	51	45	17	0	57	
Delaware	1					
District of Columbia	NA	NA				Dept. of Consumer and Regulatory Affairs
Florida	NA	NA				FL Dept. of Agriculture and Consumer Services
Georgia	NA	NA				GA Dept. of Agriculture and Dept. of Natural Resources
Maryland	25	19	0	0	19	
North Carolina	NA	NA	0	0	29	
South Carolina	8	5	0	0	5	
Virginia	17	17	17	0	0	
West Virginia	NA	4	0	0	4	
EAST SOUTH CENTRAL	76	46	2	0	28	
Alabama	6	5	0	0	5	
Kentucky	34	17	0	0	14	
Mississippi	NA	3	2	0	0	
Tennessee	36	21	0	0	9	FDA, TN Dept. of Agriculture, TN Dept. of Health and Env.
WEST SOUTH CENTRAL	19	24	0	0	24	
Arkansas	NA	0				
Louisiana	NA	5	0	0	5	
Oklahoma	NA	NA				State Environmental Laboratory
Texas	19	19	0	0	19	
MOUNTAIN	32	25	1	0	14	
Arizona	NA	NA				State Agriculture Laboratory
Colorado	8	8	0	0	7	
Idaho	14	14	1	0	7	
Montana	NA	NA				MT Dept. of Livestock
Nevada	4	3				
New Mexico	5	NA				
Utah	NA	NA				UT Dept. of Agriculture
Wyoming	1					Dept. of Agriculture
PACIFIC	11	3	3	0	0	
Alaska	3	NA				Dept. of Environmental Conservation, FDA
California	NA	NA				Dept. of Food and Agriculture
Hawaii	8	3	3	0	0	
Oregon	NA	NA				Dept. of Agriculture
Washington	NA	NA				Dept. of Agriculture
TERRITORIES	12	0	0	0	0	
Guam	NA					
Puerto Rico	12	0				FDA
Virgin Islands	NA					

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 57. LABORATORY IMPROVEMENT PROGRAM-Dairy and Food Laboratories-Activity of LIP Staff (continued)

Lab & Region	Proficiency Testing	Field Visits - LIP Programs		
		Licensed/ Permit/ Approved	Certified	Other
(8)	(9)	(10)	(11)	(12)
TOTAL	18	8	16	
NEW ENGLAND				
Connecticut	X	X		
Massachusetts				
Maine				
New Hampshire			X	
Rhode Island		X	X	
Vermont				
MIDDLE ATLANTIC				
New Jersey	X	X	X	Training and remedial
New York*				
Pennsylvania				
EAST NORTH CENTRAL				
Illinois	X		X	
Indiana	X		X	
Michigan				
Ohio	X	X		
Wisconsin	X			
WEST NORTH CENTRAL				
Iowa	X			
Kansas				
Minnesota				
Missouri	X	X		
Nebraska				
North Dakota	X		X	
South Dakota				
SOUTH ATLANTIC				
Delaware				
District of Columbia				
Florida				
Georgia				
Maryland	X		X	Review new personnel, procedures, changes in equipment/facilities
North Carolina	X		X	
South Carolina	X		X	
Virginia				
West Virginia	X		X	
EAST SOUTH CENTRAL				
Alabama	X		X	
Kentucky	X		X	
Mississippi				
Tennessee				
WEST SOUTH CENTRAL				
Arkansas				
Louisiana	X	X	X	
Oklahoma				
Texas	X		X	
MOUNTAIN				
Arizona				
Colorado	X		X	
Idaho				
Montana		X		
Nevada				
New Mexico			X	
Utah				
Wyoming				
PACIFIC				
Alaska				
California				
Hawaii		X		
Oregon				
Washington				
TERRITORIES				
Guam				
Puerto Rico				
Virgin Islands				

* New York did not report for fiscal year 1988.

TABLE 57. LABORATORY IMPROVEMENT PROGRAM-Dairy and Food Laboratories-Activity of LIP Staff (continued)

Lab & Region	Field Visits - Other Programs		Training	Consultation	Other
	Licensed/ Permit/ Approved	Certified			
(8)	(13)	(14)	(15)	(16)	(17)
TOTAL	3	4	19	21	
NEW ENGLAND					
Connecticut			X	X	
Massachusetts					
Maine					
New Hampshire					
Rhode Island			X	X	
Vermont					
MIDDLE ATLANTIC					
New Jersey					
New York*					
Pennsylvania					
EAST NORTH CENTRAL					
Illinois			X		Annual seminar for laboratory personnel
Indiana			X	X	
Michigan					
Ohio			X		
Wisconsin	X		X	X	
WEST NORTH CENTRAL					
Iowa	X	X			
Kansas					
Minnesota					
Missouri			X	X	
Nebraska					
North Dakota			X	X	
South Dakota					
SOUTH ATLANTIC					
Delaware					
District of Columbia					
Florida					
Georgia					
Maryland			X	X	
North Carolina			X	X	
South Carolina			X	X	
Virginia					
West Virginia			X	X	
EAST SOUTH CENTRAL					
Alabama			X	X	
Kentucky			X	X	
Mississippi				X	
Tennessee					
WEST SOUTH CENTRAL					
Arkansas					
Louisiana	X	X	X	X	
Oklahoma					
Texas					
MOUNTAIN					
Arizona					
Colorado		X		X	
Idaho					
Montana			X	X	
Nevada					
New Mexico		X	X	X	
Utah				X	
Wyoming					
PACIFIC					
Alaska					
California					
Hawaii				X	
Oregon			X	X	
Washington					
TERRITORIES					
Guam					
Puerto Rico			X	X	
Virgin Islands					

* New York did not report for fiscal year 1988.

TABLE 58. LABORATORY IMPROVEMENT PROGRAM-Water Laboratories

Lab & Region	Number of Labs in State	Number of Water Labs in State			Other Agency or Department Responsible for Licensing, Registering, Approving, Certifying Laboratories
		Licensed/ Permit/ Approved	Registered	Certified	
(1)	(2)	(3)	(4)	(5)	(6)
TOTAL	2,915	1,697	650	3,254	
AVERAGE	88	121	325	112	
NEW ENGLAND	289	111	0	230	
Connecticut	118	95	0	95	
Massachusetts	120	0	0	100	Dept. of Environmental Quality Engineering at Lawrence Experimental Station
Maine	25	0	0	25	
New Hampshire	NA				Dept. of Environmental Services
Rhode Island	18	18	0	0	
Vermont	10	0	0	10	
MIDDLE ATLANTIC	NA	0	0	0	
New Jersey	NA				Dept. of Environmental Protection
New York*					
Pennsylvania	NA				Dept. of Environmental Resources
EAST NORTH CENTRAL	908	401	321	139	
Illinois	NA	0	0	78	
Indiana	NA	0	0	61	
Michigan	NA				Water Supply Division, Bureau of Environmental & Occupational Health
Ohio	470	284	0	0	
Wisconsin	438	117	321	0	Dept. of Natural Resources and Division of Health
WEST NORTH CENTRAL	319	31	0	288	
Iowa	NA	0	0	48	Dept. of Natural Resources, Environmental Protection Division
Kansas	NA	0	0	125	
Minnesota	250	0	0	53	
Missouri	NA	31	0	0	
Nebraska	15	0	0	15	
North Dakota	41	0	0	41	
South Dakota	13	0	0	6	
SOUTH ATLANTIC	382	5	NA	379	
Delaware	6	5	0	0	
District of Columbia	0				
Florida	220	0	0	220	
Georgia	NA				Dept. of Natural Resources
Maryland	75	0	0	54	
North Carolina	NA	NA	NA	NA	
South Carolina	NA	NA			Bureau of Field & Analytical Services, Environmental Quality Control, DHEC
Virginia	81	0	0	81	
West Virginia	NA	0	0	24	
EAST SOUTH CENTRAL	212	137	0	55	
Alabama	24	0	0	22	
Kentucky	NA				Dept. of Natural Resources.
Mississippi	12	0	0	11	
Tennessee	176	137	0	22	
WEST SOUTH CENTRAL	72	4	4	72	
Arkansas	NA	4	4	0	
Louisiana	16	0	0	16	
Oklahoma	NA				State Environmental Laboratory
Texas	56	0	0	56	
MOUNTAIN	237	155	0	148	
Arizona	57	57	0	0	
Colorado	68	0	0	68	
Idaho	29	29	0	29	
Montana	16	15	0	0	
Nevada	11	0	0	10	
New Mexico	41	0	0	41	Environment Improvement Division
Utah	NA	54	0	0	
Wyoming	15	0	0	0	Environmental Protection Agency region 7
PACIFIC	481	60	0	417	
Alaska	20	20	0	0	Dept. of Environmental Conservation
California	360	0	0	360	
Hawaii	14	0	0	10	
Oregon	40	40	0	0	Inorganic chemistry - DEQ; Organic chemistry - Dept. of Agriculture
Washington	47	0	0	47	Office of Licensing and Certification, EPA
TERRITORIES	15	0	0	14	
Guam	NA				
Puerto Rico	15	0	0	14	
Virgin Islands	NA				Private organization

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 58. LABORATORY IMPROVEMENT PROGRAM-Water Laboratories (continued)

Lab & Region	Number of Water Testing Laboratories in Laboratory Improvement Program											
	Licensed/Granted Permits/Approved				Registered				Certified			
	Microbiology	Chemistry	Microbiol. and Chemistry	Total	Microbiology	Chemistry	Microbiol. and Chemistry	Total	Microbiology	Chemistry	Microbiol. and Chemistry	Total
(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
TOTAL	100	111	404	615	9	38	71	118	719	189	363	1,271
AVERAGE	10	11	40	62	9	38	71	118	28	7	14	49
NEW ENGLAND	19	38	77	134	9	38	71	118	11	0	23	34
Connecticut	9	38	71	118	9	38	71	118				0
Massachusetts				0				0				0
Maine				0				0	3	0	21	24
New Hampshire				0				0				0
Rhode Island	10	0	6	16				0				0
Vermont				0				0	8	0	2	10
MIDDLE ATLANTIC	0	0	0	0	0	0	0	0	0	0	0	0
New Jersey				0				0				0
New York*				0				0				0
Pennsylvania				0				0				0
EAST NORTH CENTRAL	0	4	280	284	0	0	0	0	138	0	0	138
Illinois				0				0	78	0	0	78
Indiana				0				0	60	0	0	60
Michigan				0				0				0
Ohio	0	4	280	284				0				0
Wisconsin				0				0				0
WEST NORTH CENTRAL	23	6	2	31	0	0	0	0	72	140	27	239
Iowa				0				0				0
Kansas				0				0	4	103	18	125
Minnesota				0				0	53	0	0	53
Missouri	23	6	2	31				0				0
Nebraska				0				0	3	4	8	15
North Dakota				0				0	11	30	0	41
South Dakota				0				0	1	3	1	5
SOUTH ATLANTIC	2	0	3	5	0	0	0	0	259	96	97	452
Delaware	2	0	3	5				0				0
District of Columbia				0				0				0
Florida				0				0	100	80	40	220
Georgia				0				0				0
Maryland				0				0	28	11	25	64
North Carolina				0				0	58	0	5	63
South Carolina				0				0				0
Virginia				0				0	54	3	24	81
West Virginia				0				0	19	2	3	24
EAST SOUTH CENTRAL	0	0	0	0	0	0	0	0	55	0	1	56
Alabama				0				0	22	0	0	22
Kentucky				0				0				0
Mississippi				0				0	11	0	1	12
Tennessee				0				0	22	0	0	22
WEST SOUTH CENTRAL	4	0	0	4	0	0	0	0	72	0	0	72
Arkansas	4	0	0	4				0				0
Louisiana				0				0	16	0	0	16
Oklahoma				0				0				0
Texas				0				0	56	0	0	56
MOUNTAIN	35	69	44	148	0	0	0	0	82	32	22	136
Arizona	20	10	27	57				0				0
Colorado				0				0	28	23	19	68
Idaho				0				0	11	6	0	17
Montana	8	6	1	15				0				0
Nevada				0				0	4	3	3	10
New Mexico				0				0	41	0	0	41
Utah	7	53	16	76				0				0
Wyoming				0				0				0
PACIFIC	40	0	0	40	0	0	0	0	90	59	220	369
Alaska				0				0				0
California				0				0	85	55	220	360
Hawaii				0				0	5	4	0	9
Oregon	40	0	0	40				0				0
Washington				0				0				0
TERRITORIES	0	0	0	0	0	0	0	0	12	2	0	14
Guam				0				0				0
Puerto Rico				0				0	12	2	0	14
Virgin Islands				0				0				0

* New York did not report for fiscal year 1988.

TABLE 58. LABORATORY IMPROVEMENT PROGRAM-Water Laboratories-Activity of LIP Staff (continued)

Lab & Region (20)	Proficiency Testing		Field Visits - LIP Program		
	Water Microbiology (21)	Water Chemistry (22)	Licensed/ Permit Approved (23)	Certified (24)	Other (25)
TOTAL	19	20	8	27	
NEW ENGLAND					
Connecticut	X	X			
Massachusetts					
Maine	X	X		X	
New Hampshire					
Rhode Island	X		X		
Vermont		X		X	
MID-ATLANTIC					
New Jersey					
New York*					
Pennsylvania					
EAST NORTH CENTRAL					
Illinois				X	
Indiana				X	
Michigan					
Ohio			X		
Wisconsin					
WEST NORTH CENTRAL					
Iowa	X	X		X	
Kansas		X		X	
Minnesota				X	
Missouri			X		
Nebraska	X	X		X	
North Dakota	X	X		X	
South Dakota				X	
SOUTH ATLANTIC					
Delaware					
District of Columbia					
Florida	X	X		X	
Georgia					
Maryland	X	X		X	
North Carolina	X	X		X	
South Carolina					
Virginia		X		X	
West Virginia	X	X		X	
EAST SOUTH CENTRAL					
Alabama				X	
Kentucky					
Mississippi				X	
Tennessee		X		X	Microbiology consulting
WEST SOUTH CENTRAL					
Arkansas					
Louisiana	X	X		X	
Oklahoma					
Texas				X	
MOUNTAIN					
Arizona	X	X	X		
Colorado		X		X	
Idaho			X		
Montana	X	X	X		
Nevada				X	
New Mexico				X	
Utah	X	X	X	X	
Wyoming					
PACIFIC					
Alaska	X				
California	X	X		X	Consultation/training
Hawaii	X			X	
Oregon	X		X		
Washington					
TERRITORIES					
Guam					
Puerto Rico	X	X		X	
Virgin Islands					

* New York did not report for fiscal year 1988.

TABLE 58. LABORATORY IMPROVEMENT PROGRAM-Water Laboratories-Activity of LIP Staff (continued)

Lab & Region	Field Visits - Other Programs		
	Licensed/ Permit/ Approved	Certified	Other
(20)	(26)	(27)	(28)
TOTAL	0	4	
NEW ENGLAND			
Connecticut			
Massachusetts			
Maine			
New Hampshire			
Rhode Island			
Vermont			
MID-ATLANTIC			
New Jersey			
New York*			
Pennsylvania			
EAST NORTH CENTRAL			
Illinois			
Indiana			
Michigan			
Ohio			
Wisconsin			
WEST NORTH CENTRAL			
Iowa			
Kansas			
Minnesota			
Missouri			
Nebraska			
North Dakota			
South Dakota			
SOUTH ATLANTIC			
Delaware			
District of Columbia			
Florida			
Georgia			
Maryland			Review waste water testing protocol as it relates to drinking water quality labs.
North Carolina			
South Carolina			
Virginia		X	
West Virginia			
EAST SOUTH CENTRAL			
Alabama			
Kentucky			
Mississippi			
Tennessee		X	
WEST SOUTH CENTRAL			
Arkansas			
Louisiana			
Oklahoma			
Texas			
MOUNTAIN			
Arizona			
Colorado			
Idaho			
Montana			
Nevada			
New Mexico		X	for Environmental Improvement Division
Utah		X	
Wyoming			
PACIFIC			
Alaska			
California			
Hawaii			
Oregon			
Washington			
TERRITORIES			
Guam			
Puerto Rico			
Virgin Islands			

* New York did not report for fiscal year 1988.

TABLE 58. LABORATORY IMPROVEMENT PROGRAM-Water Laboratories-Activity of LIP Staff (continued)

Lab & Region (20)	Training (29)	Consultation (30)	Other (31)
TOTAL	29	28	
NEW ENGLAND			
Connecticut	X	X	
Massachusetts			
Maine	X	X	
New Hampshire			
Rhode Island	X	X	
Vermont	X	X	
MID-ATLANTIC			
New Jersey			
New York*			
Pennsylvania			
EAST NORTH CENTRAL			
Illinois	X		Annual seminar for laboratory personnel
Indiana	X	X	
Michigan			
Ohio	X		
Wisconsin	X	X	
WEST NORTH CENTRAL			
Iowa	X	X	Proficiency testing for various chemical parameters and coliforms.
Kansas			
Minnesota			
Missouri	X	X	
Nebraska			
North Dakota	X	X	
South Dakota	X	X	
SOUTH ATLANTIC			
Delaware			
District of Columbia			
Florida			
Georgia			
Maryland	X	X	Unannounced visits to program labs; evaluation of new personnel, equipment, procedures.
North Carolina	X	X	
South Carolina			
Virginia	X	X	
West Virginia	X	X	
EAST SOUTH CENTRAL			
Alabama	X	X	
Kentucky			
Mississippi			
Tennessee	X		Microbiology bench training, Consultation on new lab or remodeling existing facilities.
WEST SOUTH CENTRAL			
Arkansas		X	
Louisiana	X	X	
Oklahoma			
Texas	X	X	
MOUNTAIN			
Arizona	X	X	
Colorado	X	X	
Idaho			
Montana	X	X	
Nevada			
New Mexico	X	X	
Utah		X	Workshops
Wyoming			
PACIFIC			
Alaska	X	X	
California	X	X	
Hawaii	X	X	
Oregon	X	X	
Washington			
TERRITORIES			
Guam			
Puerto Rico	X	X	
Virgin Islands			

* New York did not report for fiscal year 1988.

TABLE 59. LABORATORY IMPROVEMENT PROGRAM-Other LIP Activities for All Types of Laboratories

Lab & Region (1)	Program Activity (2)
NEW ENGLAND	
Connecticut	Recombination DNA registration-prepare/administer exams for personnel to work in dairy labs. Qualify lab directors by training/experience for env. labs. NPDES approval, inspection, prof. testing. Air registered: 4 in-state, 2 out-of state, 17 labs only NPDES, 22 labs only SDWA, 51 labs NPDES & SDWA.
Massachusetts	Maintain an AV library; Conduct bi-weekly seminars
Maine	Prepares/edits "Lab Gab", quarterly newsletter of public health lab. Provides consultation to state Medicaid clinical testing & reimbursement programs.
New Hampshire	
Rhode Island	
Vermont	
MIDDLE ATLANTIC	
New Jersey	
New York*	
Pennsylvania	Low vol. proficiency testing program for POLs. (1165 POLs participate in this program.)
EAST NORTH CENTRAL	
Illinois	
Indiana	
Michigan	The program licenses POLs (groups of six or more physicians). Number included in the figures for "lic. clinical labs".
Ohio	
Wisconsin	
WEST NORTH CENTRAL	
Iowa	
Kansas	Breath alcohol training of operators - 974 cert.; cert. of breath alcohol agencies - 87 agencies, 79 instruments; prof. test program for breath alcohol operators (qtrly) - 418 new breath alcohol operators cert. in FY 1988; hazardous waste cert. for env. labs- 26 labs.
Minnesota	
Missouri	
Nebraska	
North Dakota	CDC field & dairy product testing workshops; LEND teleconferences; in house seminars
South Dakota	
SOUTH ATLANTIC	
Delaware	
District of Columbia	
Florida	Certification of 170 environmental laboratories.
Georgia	
Maryland	
North Carolina	Quarterly newsletter; QC (culture media)-gonorrhea control STD branch; stock bacterial cultures-maintenance/distrib.; loan AV materials.
South Carolina	Prof. testing for nurses performing tests in county health depts.-hematocrits, hemoglobins, EP urinalysis, gr. stains, bl. glucose, pregnancy tests, and syphilis serology; VD investigators - gr. stains & darkfield; instrument maintenance/repair program for county health dept. instruments (microscopes, centrifuge, bl. pressure cuffs, audiometers, EP hematofluorometers, baby scales, etc.
Virginia	
West Virginia	
EAST SOUTH CENTRAL	
Alabama	
Kentucky	
Mississippi	
Tennessee	
WEST SOUTH CENTRAL	
Arkansas	
Louisiana	
Oklahoma	
Texas	
MOUNTAIN	
Arizona	Blood alcohol program - prep./distr./follow-up of bl. alcohol proficiency specimens. Lic. lab personnel (40) to analyze blood for alcohol content. Issue permits to police officers (1800) to operate alcohol testing devices.
Colorado	Training - air pollution (odor school); newborn genetics screening (in service); drug abuse (in service); cert. - alcohol testing labs
Idaho	
Montana	
Nevada	
New Mexico	Training for microbiology & water labs in field (i.e. utility companies)
Utah	Issue bl. alcohol permits to persons for drawing blood for alcohol & drug testing at request of a police officer. Issue permits to institutions allowing to use pound animals for research. Monitor all QA activities of State Health Lab. Chair safety committee and in service training.
Wyoming	
PACIFIC	
Alaska	Provide rel./prof. samples for syphilis serology & provide ref. (stock) cultures for bacteriology.
California	
Hawaii	Driving under the influence of alcohol/drugs - reg. activities & court appearances.
Oregon	
Washington	
TERRITORIES	
Guam	
Puerto Rico	
Virgin Islands	

* New York did not report for fiscal year 1988.

TABLE 60. BIOLOGICS, REAGENTS, AND MEDIA PRODUCTION-Production of Biologics, Reagents, and Media for Distribution

Lab & Region	No. FTE'S	Biologics		Reagents	Media	Materials Produced for Distribution
		Human Use	Lab Use			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
TOTAL	195.85	1	8	12	18	
NEW ENGLAND	18.5					
Connecticut	1.50			X	X	VDRL antigen & buff. saline, serum controls, grp A Streptococcus office cult. kits
Massachusetts	17.00					Specimen mailing containers
Maine						
New Hampshire	0.00					
Rhode Island	0.00					
Vermont						
MID-ATLANTIC	2.25					
New Jersey						
New York*						
Pennsylvania	2.25		X		X	Collection kits for bact. & parasitology, lyophilized bacteria & fungi for QC, rabies abs. sera
EAST NORTH CENTRAL	109.50					
Illinois						
Indiana						
Michigan	106.00	X	X	X	X	Albumin/anthrax/rabies vaccines, diphtheria & botulism type B (veterinary) toxoids, diphtheria/tetanus toxoid (ped. & adult), diphtheria/tetanus toxoids & pertussis vaccine abs., immune globin, pertussis vaccine ads., pertussis cell conc., simulator test so'n (breathalyzer), legionella typ. sera, media for diag. labs.
Ohio	3.50				X	Martin Lewis & chocolate agar plates, Cary-Blair & throat swab medium
Wisconsin	0.00					
WEST NORTH CENTRAL	6.10					
Iowa	2.50		X	X	X	Rabid mouse brain suspension
Kansas						
Minnesota						
Missouri	1.00				X	
Nebraska	0.60			X	X	
North Dakota	1.00		X	X	X	MTM, Jembec, Aimes trans. media, saborauds, PM indicator & Jones Kendrick agars, phos. buff. saline
South Dakota	1.00					Jembec Plates
SOUTH ATLANTIC	6.00					
Delaware	0.00					
District of Columbia	0.00					
Florida	NA				X	Lowenstein Jensen media used in TB testing for HRS branch laboratories.
Georgia	0.00					
Maryland						
North Carolina	0.00					
South Carolina	3.00			X	X	
Virginia						
West Virginia	3.00				X	Media for GC program
EAST SOUTH CENTRAL	13.20					
Alabama	4.20					Mediums: C.B., Jones Kendrick; Plates: Rodac, Mod. Thayer Martin; Bottles: glycerin saline so'n, intestinal parasite, TB sputum, public & private water, milk
Kentucky	0.00					
Mississippi	0.00					
Tennessee	9.00		X	X	X	Isovitalex, VCAT; plates: Butzler, gonopak, Martin-Lewis, & 7H10; Lowenstein-Jensen tubes, Pertussis kits, Trypticase Soy slants
WEST SOUTH CENTRAL	13.60					
Arkansas	3.00			X	X	Martin Lewis culture plates, gram stain material
Louisiana	0.60					Mod. Thayer Martin, C.B. transport & EMJH media, formalin bottles (parasitological specimens), transport media (influenza specimens), collection diluent for bird blood & mosquito pools
Oklahoma	0.00					
Texas	10.00		X	X	X	Various antisera, enrichments, & bacteriological media, TB drugs for susceptibility testing
MOUNTAIN	11.70					
Arizona	6.00					Plates: blood & health infusion agar; agars: phenyl-ethylalcohol, Mueller Hinton, chocolate, MacConkey's, Hekiden-Enteric, & urea; chopped meat medium, GN broth, tryp. soy broth, sulfur inole motility, Thioglycolate broth, 6.5 % NaCl, nitrate reagent, triple sugar iron, Kovak's reagent, KOH solutions, ferric chloride, Hank's solution, polyvinyl alcohol, buff. glycerol saline, C.B. & Regan Lowe transports media, kits for collection/transport env. & clin. specimens.
Colorado	1.00					Transport media, kits for collection and transport env. & clinical specimens
Idaho						
Montana	0.20		X	X	X	Stock cult. for QC (bacteria & fungi); transport media: Cary-Blair, Regan Lowe, Jembec, viral & chlamydial.
Nevada	0.00					
New Mexico	2.50					Mod. Martin Lewis plates, milk & water bottles, 5% neutral formalin, CB media, PVA, casamino acids, PAI, charcoal, viral transport medium, 2% NaCl, gr. iodine, crystal violet
Utah						
Wyoming	2.00					
PACIFIC	15.00					
Alaska	0.00					
California	6.50					Febrile antigens produced/sold; Brucella abortus, Sal. paratyphi A & B; febrile antigens (sold only); Sal. typhi "H" & "O", Franc. tularensis; immune sera sold: Brucella abortus, Sal. paratyphi A & B, Franc. tularensis; HIV slides for IIF antibody tests; rabies conjugate (DIF antigen detection); monoclonal conjugates for influenza A (H1N1) & (H3N2).
Hawaii	6.00		X	X	X	Broths: Green tryptose, brilliant green bile, & E.C.; N.E. & EIA agar & methyl green plates (supplies produced mainly for sanitary & medical microbiology labs).
Oregon	1.00				X	Bacteriological & virological media
Washington	1.50			X	X	
TERRITORIES	0.00					
Guam						
Puerto Rico						
Virgin Islands						

* New York did not report for fiscal year 1988.

TABLE 61. RESEARCH AND DEVELOPMENT-Basic Research

Lab & Region (1)	Titles of Research Projects (2)	Funding Support				
		Number of Positions (3)	Federal Grants (4)	Contracts (5)	State Funds (6)	Other Funds (7)
TOTAL		24	769,623	208,500	79,200	113,000
NEW ENGLAND						
Connecticut	Biomonitoring of water; quality by viability of fish egg development	1			1,500	
Massachusetts	Hypothyroidism collaborative follow-up study	6	NA			
Maine						
New Hampshire						
Rhode Island						
Vermont						
MIDDLE ATLANTIC						
New Jersey						
New York*						
Pennsylvania						
EAST NORTH CENTRAL						
Illinois						
Indiana						
Michigan						
Ohio						
Wisconsin	Air toxics monitoring			15,000		
	Mutagenetic effects of toxicants	2		30,000		
	TCLP testing			3,500		
WEST NORTH CENTRAL						
Iowa						
Kansas						
Minnesota						
Missouri						
Nebraska						
North Dakota	Family planning Chlamydia study	1	22,600		NA	
	HIV IFA comparative study	NA			NA	3,000
South Dakota						
SOUTH ATLANTIC						
Delaware						
District of Columbia						
Florida						
Georgia						
Maryland	Development of an EIA & HPLC test for detection of neuroblastoma in infants	1				100,000
	Correlation of soil & dust lead levels around homes and their relationship to blood levels in children	7	686,641			
North Carolina						
South Carolina						
Virginia						
West Virginia						
EAST SOUTH CENTRAL						
Alabama						
Kentucky						
Mississippi						
Tennessee						
WEST SOUTH CENTRAL						
Arkansas						
Louisiana	Microbiological study to establish an epidemiological study site	1	60,382			
Oklahoma	E. canis in Oklahoma	0			6,000	
Texas						
MOUNTAIN						
Arizona						
Colorado						
Idaho						
Montana						
Nevada						
New Mexico	Newborn HIV screening	1			46,700	
Utah						
Wyoming						
PACIFIC						
Alaska						
California	NCI California collaborative project	4		180,000		
Hawaii						
Oregon						
Washington	Etiology of indeterminate HIV Western blot test results	NA			10,000	
	Analysis of polymorphic genetic markers in subjects testing HIV Western blot indeterminates	NA			5,000	
	Lyme disease vector surveillance project	NA			10,000	10,000
TERRITORIES						
Guam						
Puerto Rico						
Virgin Islands						

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 62. RESEARCH AND DEVELOPMENT-Applied Research

Lab & Region (1)	Titles of Research Projects (2)	Funding Support				
		Number of Positions (3)	Federal Grants (4)	Contracts (5)	State Funds (6)	Other Funds (7)
TOTAL		43.1	2,908,179	60,416	882,900	110,157
NEW ENGLAND						
Connecticut	Postdoc. fellowship-EDB, vortex, MTBE (Methyl Tertiary Butyl Ether) in water	0			12,900	
Massachusetts	Kidney transplanted associated CMV prevention	30	141,179			11,388
	Liver transplanted associated CMV prevention (funding shared with above)	2.20				
	Pediatric vaccine trial	1.0		31,530		
	Viral immunity studies	1.0				70,259
	Newborn seroprevalance study	13.0		NA		
Maine						
New Hampshire						
Rhode Island						
Vermont						
MIDDLE ATLANTIC						
New Jersey						
New York*						
Pennsylvania	Percentage of all clinical laboratory testing performed in Pennsylvania physician office labs.	1.0			46,000	
	The comparative utility of direct wet mount, conc., & trichrome procedures used in parasitology.	1.0			43,000	
	Performance of 5 direct antigen detection kits on mucoid strains of Streptococcus pyogenes.	1.0			43,000	
	Neisseria gonorrhoeae susceptibility testing & comparison of NGCLS & CDC	.05			2,000	
	Evaluation of NCS test for syphilis.	.10			4,000	
	Comparison of HIV WB methods.	.05			2,000	
EAST NORTH CENTRAL						
Illinois						
Indiana	Computer aided analysis	1.0				25,530
Michigan	Develop integrated LIMS	3.0			140,000	
	Acellular Pertussis vaccine development	5.0			290,000	
	Continue developing molecular biology capability	4.0			170,000	
	Develop Anthrax vaccine for DOD (total funding for 5 years)	6.0	2,340,000			
Ohio						
Wisconsin	Non-microscopic test development for Treponemes in lesions					3,000
	Pesticide metabolites, lab methodology development	1.0		25,000		
	Urban runoff bacteria testing, methodology & procedures			3,886		
WEST NORTH CENTRAL						
Iowa						
Kansas						
Minnesota						
Missouri						
Nebraska						
North Dakota						
South Dakota						
SOUTH ATLANTIC						
Delaware						
District of Columbia						
Florida						
Georgia						
Maryland	Detection of HPV in cervical PAP smears by gene probe technology	1.0			75,000	
North Carolina						
South Carolina						
Virginia						
West Virginia						
EAST SOUTH CENTRAL						
Alabama						
Kentucky						
Mississippi						
Tennessee						
WEST SOUTH CENTRAL						
Arkansas						
Louisiana						
Oklahoma						
Texas						
MOUNTAIN						
Arizona	Modification of EPA method 515	.20			5,000	
	Modification of EPA method 504	.20			5,000	
	Rapid screening of hazardous wastes for metals using ICP	.50			12,500	
	Round robin testing of licensed laboratories	.50			12,500	
Colorado						
Idaho						
Montana						
Nevada						
New Mexico						
Utah						
Wyoming						
PACIFIC						
Alaska						
California						
Hawaii						
Oregon						
Washington	Seroepidemiology of HTLV-I infection in Washington	NA	5,000			
	Seroprevalence of endemic typhus fever among Seattle street dwellers	NA			NA	
	CDC family of serosurveys for HIV infection	NA	420,000			
TERRITORIES						
Guam						
Puerto Rico						
Virgin Islands						

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 63. RESEARCH AND DEVELOPMENT-Technical Development

Lab & Region	Titles of Research Projects	Funding Support				
		Number of Positions	Federal Grants	Contracts	State Funds	Other Funds
(1)	(2)	(3)	(4)	(5)	(6)	(7)
TOTAL		6.05	57,542	2,000	119,250	48,125
NEW ENGLAND						
Connecticut	VZV neurologic disease without skin lesions	0				
	Adenovirus 40/41 kit evaluation	0				
	Increasing CMV IgM levels with age	0				
Massachusetts	Congenital adrenal hyperplasia screening test					20,000
Maine	Indoor air organics, pollutants	.20				5,500
	HIV confirmation, IFA, Western Blot	.75				20,825
New Hampshire						
Rhode Island						
Vermont						
MIDDLE ATLANTIC						
New Jersey						
New York*						
Pennsylvania	Effect of pH on pyruvate medium.	.10			4,000	
EAST NORTH CENTRAL						
Illinois						
Indiana						
Michigan	HIV antigen antibody detection	1.0			45,000	
Ohio						
Wisconsin	Cystic Fibrosis	2.50	57,542			
WEST NORTH CENTRAL						
Iowa						
Kansas						
Minnesota						
Missouri						
Nebraska						
North Dakota						
South Dakota						
SOUTH ATLANTIC						
Delaware						
District of Columbia						
Florida						
Georgia						
Maryland	Selection of Chlamydia antigens for monoclonal antibody development for direct agent detection. Kit/reagent evaluation to detect chlamydia in clinical specimens (incl. in above project)	1.0			88,000	
North Carolina						
South Carolina						
Virginia						
West Virginia						
EAST SOUTH CENTRAL						
Alabama						
Kentucky						
Mississippi						
Tennessee						
WEST SOUTH CENTRAL						
Arkansas						
Louisiana						
Oklahoma						
Texas						
MOUNTAIN						
Arizona						
Colorado						
Idaho						
Montana						
Nevada						
New Mexico						
Utah	Use of Dupont EIA for dried blood spots (4 month project)	.50		2,000		
	Transport time for GC cultures	0			200	
Wyoming						
PACIFIC						
Alaska						
California						
Hawaii						
Oregon						
Washington	Development of HTLV-I Western blot test methodology	NA			1,100	
	Establishment of Lyme disease serum exchange evaluation panels	NA			250	
	Cultivation of Borrelia burgdorferi for use as an antigen in serodiagnosis	NA			700	
TERRITORIES						
Guam						
Puerto Rico						
Virgin Islands						

* New York did not report for fiscal year 1988.
NOTE: NA = Data not available.

***LABORATORY
FACILITIES***

TABLE 64. DIMENSIONS OF CENTRAL AND BRANCH LABORATORIES-Professional and Technical Space

Lab & Region (1)	Total Lab		Central Laboratory		Branch Laboratory	
	Total Gross Sq. Ft.	Total Net Sq. Ft.	Gross Sq. Ft.	Net Sq. Ft.	Gross Sq. Ft.	Net Sq. Ft.
	(2)	(3)	(4)	(5)	(6)	(7)
TOTAL	1,174,849.6	1,034,038.6	995,263.6	808,417.6	179,586.0	225,621.0
AVERAGE	31,752.7	26,513.8	27,646.2	22,456.0	14,965.5	11,874.8
NEW ENGLAND	155,045.0	205,284.0	155,045.0	205,284.0	0.0	0.0
Connecticut	93,287.0	65,900.0	93,287.0	65,900.0		
Massachusetts	NA	104,126.0	NA	104,126.0		
Maine	13,708.0	8,901.0	13,708.0	8,901.0		
New Hampshire	NA	8,553.0	NA	8,553.0		
Rhode Island	32,850.0	18,404.0	32,850.0	18,404.0		
Vermont	15,200.0	NA	15,200.0	NA		
MIDDLE ATLANTIC	17,584.0	15,500.0	17,584.0	15,500.0	NA	NA
New Jersey	1,484.0	NA	1,484.0	NA		
New York*						
Pennsylvania	16,100.0	15,500.0	16,100.0	15,500.0	NA	NA
EAST NORTH CENTRAL	201,480.0	149,825.0	172,245.0	124,055.0	29,235.0	25,770.0
Illinois	30,251.0	24,391.0	18,000.0	15,700.0	12,251.0	8,691.0
Indiana	40,202.0	28,945.0	40,202.0	28,945.0		
Michigan	NA	35,672.0	NA	35,672.0		
Ohio	80,898.0	21,646.0	80,898.0	18,472.0	NA	3,174.0
Wisconsin	50,129.0	39,171.0	33,145.0	25,266.0	16,984.0	13,905.0
WEST NORTH CENTRAL	130,189.0	100,843.0	112,468.0	86,063.0	17,721.0	14,780.0
Iowa	31,008.0	18,964.0	25,067.0	14,805.0	5,941.0	4,159.0
Kansas	NA	16,882.0	NA	16,882.0		
Minnesota	29,120.0	17,420.0	29,120.0	17,420.0		
Missouri	28,462.0	21,835.0	18,482.0	12,935.0	9,980.0	8,900.0
Nebraska	9,501.0	5,236.0	9,501.0	4,717.0	NA	521.0
North Dakota	26,898.0	16,400.0	26,898.0	16,400.0		
South Dakota	5,200.0	4,104.0	3,400.0	2,904.0	1,800.0	1,200.0
SOUTH ATLANTIC	398,152.0	263,266.0	304,798.0	182,647.0	93,354.0	80,619.0
Delaware	3,670.0	NA	3,670.0	NA		
District of Columbia	12,100.0	11,000.0	12,100.0	11,000.0		
Florida	137,626.0	96,909.0	46,172.0	23,240.0	91,454.0	73,669.0
Georgia	NA	21,273.0	NA	16,173.0	NA	5,100.0
Maryland	175,000.0	90,230.0	175,000.0	90,230.0	NA	NA
North Carolina	29,400.0	18,125.0	29,000.0	17,725.0	400.0	400.0
South Carolina	31,400.0	17,200.0	31,400.0	17,200.0		
Virginia	NA	NA	NA	NA	NA	NA
West Virginia	8,956.0	8,529.0	7,456.0	7,079.0	1,500.0	1,450.0
EAST SOUTH CENTRAL	27,914.0	75,834.0	13,909.0	54,729.0	14,005.0	21,105.0
Alabama	27,914.0	22,069.0	13,909.0	9,170.0	14,005.0	12,899.0
Kentucky	NA	14,344.0	NA	14,344.0		
Mississippi	NA	NA				
Tennessee	NA	39,421.0	NA	31,215.0	NA	8,206.0
WEST SOUTH CENTRAL	87,720.0	95,902.0	71,420.0	48,900.0	16,300.0	47,002.0
Arkansas	NA	24,400.0	NA	24,400.0		
Louisiana	41,300.0	38,100.0	25,000.0	24,500.0	16,300.0	13,600.0
Oklahoma	4,146.0	NA	4,146.0	NA		
Texas	42,274.0	33,402.0	42,274.0	NA	NA	33,402.0
MOUNTAIN	59,108.0	37,441.0	57,878.0	34,701.0	1,230.0	2,740.0
Arizona	NA	14,592.0	NA	12,852.0	NA	1,740.0
Colorado	16,792.0	12,983.0	15,562.0	11,983.0	1,230.0	1,000.0
Idaho	NA	NA	NA	NA	NA	NA
Montana	8,731.0	NA	8,731.0	NA		
Nevada	10,000.0	NA	10,000.0	NA		
New Mexico	16,765.0	NA	16,765.0	NA		
Utah	NA	9,866.0	NA	9,866.0		
Wyoming	6,820.0	NA	6,820.0	NA		
PACIFIC	91,499.0	78,682.0	83,758.0	51,853.0	7,741.0	26,829.0
Alaska	7,741.0	7,134.0			7,741.0	7,134.0
California	56,729.0	43,638.0	56,729.0	43,638.0		
Hawaii	NA	19,695.0	NA	NA	NA	19,695.0
Oregon	11,483.0	8,215.0	11,483.0	8,215.0		
Washington	15,546.0	NA	15,546.0	NA		
TERRITORIES	8,158.6	11,461.6	6,158.6	4,685.6	NA	6,776.0
Guam	NA	NA				
Puerto Rico	6,158.6	11,461.6	6,158.6	4,685.6	NA	6,776.0
Virgin Islands	NA	NA	NA	NA		

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 64. DIMENSIONS OF CENTRAL AND BRANCH LABORATORIES-Laboratory Support Services Space (continued)

Lab & Region	Total Lab		Central Laboratory		Branch Laboratory	
	Total Gross Sq. Ft.	Total Net Sq. Ft.	Gross Sq. Ft.	Net Sq. Ft.	Gross Sq. Ft.	Net Sq. Ft.
(8)	(9)	(10)	(11)	(12)	(13)	(14)
TOTAL	386,269.0	435,837.8	357,258.0	382,450.8	36,177.0	53,387.0
AVERAGE	11,360.9	11,469.4	11,164.3	11,248.6	4,522.1	3,559.1
NEW ENGLAND	36,620.0	107,803.0	36,620.0	107,803.0	0.0	0.0
Connecticut	18,791.0	13,154.0	18,791.0	13,154.0		
Massachusetts	NA	83,088.0	NA	83,088.0		
Maine	7,879.0	5,229.0	7,879.0	5,229.0		
New Hampshire	NA	3,194.0	NA	3,194.0		
Rhode Island	5,850.0	3,138.0	5,850.0	3,138.0		
Vermont	4,100.0	NA	4,100.0	NA		
MIDDLE ATLANTIC	16,980.0	10,500.0	16,980.0	10,500.0	NA	NA
New Jersey	3,480.0	NA	3,480.0	NA		
New York*						
Pennsylvania	13,500.0	10,500.0	13,500.0	10,500.0	NA	NA
EAST NORTH CENTRAL	40,490.0	64,998.0	27,654.0	55,798.0	12,836.0	9,200.0
Illinois	9,389.0	5,268.0	NA	NA	9,389.0	5,268.0
Indiana	7,361.0	5,300.0	7,361.0	5,300.0		
Michigan	NA	25,177.0	NA	25,177.0		
Ohio	NA	12,491.0	NA	11,191.0	NA	1,300.0
Wisconsin	23,740.0	16,764.0	20,293.0	14,130.0	3,447.0	2,634.0
WEST NORTH CENTRAL	55,999.0	39,983.0	55,009.0	39,162.0	990.0	821.0
Iowa	17,183.0	9,820.0	16,393.0	9,263.0	790.0	557.0
Kansas	NA	1,323.0	NA	1,323.0		
Minnesota	12,596.0	9,553.0	12,596.0	9,553.0		
Missouri	18,684.0	15,812.0	18,684.0	15,812.0		
Nebraska	1,176.0	915.0	1,176.0	811.0	NA	104.0
North Dakota	2,160.0	NA	2,160.0	NA		
South Dakota	4,200.0	2,560.0	4,000.0	2,400.0	200.0	160.0
SOUTH ATLANTIC	76,029.0	53,149.0	66,229.0	40,154.0	9,800.0	12,995.0
Delaware	1,750.0	NA	1,750.0	NA		
District of Columbia	3,300.0	3,000.0	3,300.0	3,000.0		
Florida	NA	NA	NA	NA	NA	NA
Georgia	NA	8,731.0	NA	3,136.0	NA	5,595.0
Maryland	8,518.0	6,667.0	8,518.0	6,667.0	NA	NA
North Carolina	29,800.0	18,391.0	20,000.0	10,991.0	8,800.0	7,400.0
South Carolina	21,161.0	11,900.0	21,161.0	11,900.0		
Virginia	NA	NA	NA	NA	NA	NA
West Virginia	11,500.0	4,460.0	11,500.0	4,460.0		
EAST SOUTH CENTRAL	47,298.0	60,102.6	40,820.0	49,286.6	6,478.0	10,816.0
Alabama	28,238.0	20,239.0	21,760.0	14,346.0	6,478.0	5,893.0
Kentucky	NA	6,268.0	NA	6,268.0		
Mississippi	19,060.0	11,355.6	19,060.0	11,355.6		
Tennessee	NA	22,240.0	NA	17,317.0	NA	4,923.0
WEST SOUTH CENTRAL	25,730.0	23,733.0	25,730.0	12,687.0	NA	11,046.0
Arkansas	NA	8,687.0	NA	8,687.0		
Louisiana	4,300.0	4,000.0	4,300.0	4,000.0	NA	NA
Oklahoma	6,630.0	NA	6,630.0	NA		
Texas	14,800.0	11,046.0	14,800.0	NA	NA	11,046.0
MOUNTAIN	9,748.0	14,341.0	16,853.0	13,423.0	59.0	918.0
Arizona	NA	6,497.0	NA	5,627.0	NA	870.0
Colorado	3,308.0	2,681.0	3,249.0	2,643.0	59.0	48.0
Idaho	NA	NA	NA	NA	NA	NA
Montana	6,000.0	NA	6,000.0	NA		
Nevada	NA	NA	NA	NA		
New Mexico	NA	NA	7,164.0	NA		
Utah	NA	5,153.0	NA	5,153.0		
Wyoming	440.0	NA	440.0	NA		
PACIFIC	77,375.0	57,150.0	71,361.0	49,559.0	6,014.0	7,591.0
Alaska	6,014.0	5,549.0			6,014.0	5,549.0
California	55,326.0	42,559.0	55,326.0	42,559.0		
Hawaii	NA	2,042.0	NA	NA	NA	2,042.0
Oregon	9,784.0	7,000.0	9,784.0	7,000.0		
Washington	6,251.0	NA	6,251.0	NA		
TERRITORIES	NA	4,078.2	NA	4,078.2	0.0	0.0
Guam	NA	NA				
Puerto Rico	NA	4,078.2	NA	4,078.2		
Virgin Islands	NA	NA	NA	NA		

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

**TABLE 64. DIMENSIONS OF CENTRAL AND BRANCH LABORATORIES-Administration and Clerical Space
(continued)**

Lab & Region	Total Lab		Central Laboratory		Branch Laboratory	
	Total Gross Sq. Ft.	Total Net Sq. Ft.	Gross Sq. Ft.	Net Sq. Ft.	Gross Sq. Ft.	Net Sq. Ft.
	(15)	(17)	(18)	(19)	(20)	(21)
TOTAL	240,110.3	315,795.8	210,065.3	278,655.8	30,045.0	37,140.0
AVERAGE	7,062.1	8,535.0	6,365.6	8,444.1	3,338.3	2,321.3
NEW ENGLAND	25,878.0	69,041.0	25,878.0	69,041.0	0.0	0.0
Connecticut	11,484.0	8,038.0	11,484.0	8,038.0		
Massachusetts	NA	54,786.0	NA	54,786.0		
Maine	1,894.0	1,894.0	1,894.0	1,894.0		
New Hampshire	NA	882.0	NA	882.0		
Rhode Island	6,300.0	3,441.0	6,300.0	3,441.0		
Vermont	6,200.0	NA	6,200.0	NA		
MIDDLE ATLANTIC	12,796.0	5,800.0	12,796.0	5,800.0	NA	NA
New Jersey	4,896.0	NA	4,896.0	NA		
New York*						
Pennsylvania	7,900.0	5,800.0	7,900.0	5,800.0	NA	NA
EAST NORTH CENTRAL	29,045.0	32,871.0	15,951.0	23,843.0	13,094.0	9,028.0
Illinois	7,773.0	4,297.0	NA	NA	7,773.0	4,297.0
Indiana	3,055.0	2,200.0	3,055.0	2,200.0		
Michigan	NA	5,574.0	NA	5,574.0		
Ohio	NA	7,924.0	NA	7,321.0	NA	603.0
Wisconsin	18,217.0	12,876.0	12,896.0	8,748.0	5,321.0	4,128.0
WEST NORTH CENTRAL	31,421.0	21,887.0	27,741.0	18,636.0	3,680.0	3,251.0
Iowa	13,783.0	9,158.0	10,587.0	6,498.0	3,178.0	2,660.0
Kansas	NA	1,679.0	NA	1,679.0		
Minnesota	3,134.0	2,134.0	3,134.0	2,134.0		
Missouri	7,428.0	6,626.0	7,426.0	6,626.0		
Nebraska	1,594.0	1,290.0	1,594.0	1,099.0	NA	191.0
North Dakota	4,000.0	NA	4,000.0	NA		
South Dakota	1,504.0	1,000.0	1,000.0	600.0	504.0	400.0
SOUTH ATLANTIC	50,669.0	35,452.0	50,469.0	33,452.0	200.0	2,000.0
Delaware	505.0	NA	505.0	NA		
District of Columbia	2,200.0	2,000.0	2,200.0	2,000.0		
Florida	NA	NA	NA	NA	NA	NA
Georgia	NA	5,209.0	NA	3,409.0	NA	1,800.0
Maryland	16,872.0	9,100.0	16,872.0	9,100.0	NA	NA
North Carolina	10,064.0	5,525.0	10,064.0	5,525.0		
South Carolina	15,699.0	8,700.0	15,699.0	8,700.0		
Virginia	NA	NA	NA	NA	NA	NA
West Virginia	5,329.0	4,918.0	5,129.0	4,718.0	200.0	200.0
EAST SOUTH CENTRAL	9,666.0	88,411.0	5,691.0	81,576.0	3,975.0	6,835.0
Alabama	9,666.0	7,304.0	5,691.0	3,752.0	3,975.0	3,552.0
Kentucky	NA	3,576.0	NA	3,576.0		
Mississippi	NA	NA				
Tennessee	NA	77,531.0	NA	74,248.0	NA	3,283.0
WEST SOUTH CENTRAL	19,548.0	15,919.0	13,948.0	5,080.0	5,600.0	10,839.0
Arkansas	NA	1,880.0	NA	1,880.0		
Louisiana	9,200.0	7,650.0	3,600.0	3,200.0	5,600.0	4,450.0
Oklahoma	1,148.0	NA	1,148.0	NA		
Texas	9,200.0	6,389.0	9,200.0	NA	NA	6,389.0
MOUNTAIN	12,181.0	11,472.0	12,122.0	10,934.0	59.0	538.0
Arizona	NA	6,017.0	NA	5,527.0	NA	490.0
Colorado	2,960.0	2,408.0	2,901.0	2,360.0	59.0	48.0
Idaho	NA	NA	NA	NA	NA	NA
Montana	600.0	NA	600.0	NA		
Nevada	NA	NA	NA	NA		
New Mexico	8,071.0	NA	8,071.0	NA		
Utah	NA	3,047.0	NA	3,047.0		
Wyoming	550.0	NA	550.0	NA		
PACIFIC	45,377.5	32,038.0	41,940.5	27,389.0	3,437.0	4,649.0
Alaska	3,878.0	3,171.0	441.0	NA	3,437.0	3,171.0
California	32,042.0	24,648.0	32,042.0	24,648.0		
Hawaii	NA	1,478.0	NA	NA	NA	1,478.0
Oregon	3,831.0	2,741.0	3,831.0	2,741.0		
Washington	5,626.5	NA	5,626.5	NA		
TERRITORIES	3,528.8	2,904.8	3,528.8	2,904.8	0.0	0.0
Guam	NA	NA				
Puerto Rico	3,528.8	2,904.8	3,528.8	2,904.8		
Virgin Islands	NA	NA	NA	NA		

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

***LABORATORY
AUTOMATIC DATA
PROCESSING (ADP)
SERVICES***

TABLE 65. SOURCES OF DIAGNOSTIC ADP SERVICES

Lab & Region	Bacteriology	Mycology	Parasitology	Virology	Immunology	Hematology	Clinical Chemistry	Newborn Genetic Screening	Toxicology	Env. Chemistry	Env. Microbiology	Occupational Safety and Health	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
NEW ENGLAND													
Connecticut	D	D	D	D	D	D	D	H,D	H,D	D	D	D	
Massachusetts	D	D		D				D	D	D	D		
Maine								C		D	D		
New Hampshire				P									
Rhode Island	D				D		D	D	D	D	D	D	
Vermont	H								H	H	H		
MIDDLE ATLANTIC													
New Jersey													
New York*													
Pennsylvania	H	H	H	H	H	H	H	P	H				
EAST NORTH CENTRAL													
Illinois	D	D	D	D	D			D		D	D		
Indiana				D	D					D	D		
Michigan	D	D	D	D				D		H,D			
Ohio													
Wisconsin	D			D	D		D	D	D	D	D	D	D- Cytology
WEST NORTH CENTRAL													
Iowa	D	D	D	D	D			D		D	D		
Kansas	D			D	D		D	D	D	D	D	D	
Minnesota	D							D		D	D	D	
Missouri													
Nebraska	C	C	C	C	C			C	C	C	C	C	C
North Dakota	D	D	D	D	D					P,D	D		
South Dakota	D	D	D	D	D	D	D						
SOUTH ATLANTIC													
Delaware				D						D			
District of Columbia													
Florida				D				D		D			
Georgia				P			P	D					
Maryland	D				D			D					
North Carolina							D	D		D	D		
South Carolina	H	H	H	H	H	H	H	H,D	H	H	H,D	H	
Virginia								P					
West Virginia					D								
EAST SOUTH CENTRAL													
Alabama				D	D		D	D			D		
Kentucky								D					
Mississippi													
Tennessee								D					
WEST SOUTH CENTRAL													
Arkansas	H				H			D	D	D			
Louisiana								P		P	P		
Oklahoma													
Texas	H,P,D	P,D	P,D	P,D	P,D		P,D	P,D		H,D			
MOUNTAIN													
Arizona	D	D	D	D	D					D	D	D	
Colorado	D				D	D	D	D	D	D			
Idaho	D	D		D				D					
Montana				D									
Nevada	H			H	H								
New Mexico	D	D	D	D	D			D	D	D	D		
Utah	D				D			D	D	D	D		
Wyoming													
PACIFIC													
Alaska	D	D	D	D	D				D		D		
California	C,H	C,H	C,H	C,H	C,H				D	D			
Hawaii													
Oregon								D					
Washington	D		D		D			D		D	D		
TERRITORIES													
Guam													
Puerto Rico													
Virgin Islands	P		P		P	P	P		P	P			

ADP Services received from: S=State Central Data Processing Center, H=State Health Department, P=Private Vendor, D=Dedicated Internal Laboratory Computer.

* New York did not report for fiscal year 1988.

TABLE 66. SOURCES OF LABORATORY ADMINISTRATION AND MANAGEMENT ADP SERVICES

Lab & Region	Workload Statistics	Management Information	Purchasing	Personnel Records	Supply Inventory	Production/Distribution Inventory	Training	Laboratory Improvement Program	Billing for Tests (Fees)	Expenditures	Budget Tracking	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
NEW ENGLAND												
Connecticut	D							H	D			
Massachusetts	D	D	D	D	D	D	D	D	D	D	D	
Maine												D - Word processing
New Hampshire		H	H		H							H
Rhode Island	D	D	D	H,D	D			D		D	D	
Vermont		H							H	H	C,H	
MIDDLE ATLANTIC												
New Jersey												
New York*												
Pennsylvania	H	H	C,H	C,H	H	H	H	H	H	C,H	C,H	
EAST NORTH CENTRAL												
Illinois	D	D	D		D		D	D	C,H	C,H	C,H,D	
Indiana		H			D			D				
Michigan	D	D	C,H	C,H	H			H,D		D	D	
Ohio									C	H	H	
Wisconsin	D			P,D	P			P,D	D		P	
WEST NORTH CENTRAL												
Iowa	D	D		D					D		D	
Kansas	D		D	C	D	D	D	D	D	C	C	
Minnesota	D	D	C	C				C	D			
Missouri												
Nebraska	C	C	C	C					C	C	C	
North Dakota	P,D	P,D	H,D						H,P,D	C,H	C,H	
South Dakota	D	H	H	H					D	H	H	
SOUTH ATLANTIC												
Delaware												
District of Columbia												
Florida	D								H,P			
Georgia	D	D			D							
Maryland	D			D				H				
North Carolina										S	S	
South Carolina	H		P		H				H	H	H	
Virginia			H	H	H				H	H	H	
West Virginia	D	D	D	D		D		D	D	D	D	
EAST SOUTH CENTRAL												
Alabama	D	D	D	D	D	D	D	D	D	D	D	
Kentucky			C						H	H	H	
Mississippi												
Tennessee					D					D	D	
WEST SOUTH CENTRAL												
Arkansas	H	C	C	H					H	C,H	C	H - Mail address labels
Louisiana	P	P,D	P		P							H - Word processing
Oklahoma		D							D			
Texas	H	H,D	H,D	H,D	H	D			H,D	H	H	
MOUNTAIN												
Arizona	D	D			H,D		D	D	D	H,D	H,D	
Colorado									H	H	H	
Idaho	D	D	C	C	P			D	D	C	C	
Montana									C	C	C	
Nevada		H		H					H	C	C	
New Mexico	D	D	D	C,D	D	D			D	C,D	C,D	
Utah	D	D	D	C	D	D						
Wyoming												
PACIFIC												
Alaska	P	P	P							P	P	
California	C,H,D	C,D	H,D	H,D	H		D	D		H,D	H,D	Sample tracking & reporting
Hawaii												
Oregon	D	D	C,H	C,H			C,H,D		C,H	C,H	C,H	
Washington	D		P						D			
TERRITORIES												
Guam												
Puerto Rico												
Virgin Islands												

ADP Services received from: S=State Central Data Processing Center, H=State Health Department, P=Private Vendor, D=Dedicated Internal Laboratory Computer.

* New York did not report for fiscal year 1988.

TABLE 67. ADP SERVICES PROVIDED EXTERNALLY

Lab & Region	State Central Data Processing Center		State Health Department	
	Computer Name and Model	Primary Programming Language	Computer Name and Model	Primary Programming Language
(1)	(2)	(3)	(4)	(5)
NEW ENGLAND				
Connecticut	IBM 3083	COBOL	WANG VS 300	Several
Massachusetts				
Maine	Honeywell DPS6/95	COBOL		
New Hampshire	WANG VS 100	COBOL		
Rhode Island				
Vermont	IBM		DEC 20/60	1022 IBM (FORTRAN)
MIDDLE ATLANTIC				
New Jersey				
New York*				
Pennsylvania	Sperry Univac UTS40	COBOL	IBM 3081D18	COBOL & SAS
EAST NORTH CENTRAL				
Illinois	IBM	NOMAD II		
Indiana			IBM 4381	COBOL
Michigan				
Ohio	IBM 3090	COBOL	UNISYSTEM 1900/10 CADE	
Wisconsin				
WEST NORTH CENTRAL				
Iowa				
Kansas			IBM 3093	
Minnesota	Cray	FORTRAN		
Missouri				
Nebraska	IBM 3090-200E	COBOL - SQL		
North Dakota			IBM AT, XT, PC	
South Dakota			IBM	COBOL
SOUTH ATLANTIC				
Delaware				
District of Columbia				
Florida				
Georgia				
Maryland	IBM	COBOL		
North Carolina				
South Carolina			NAS 8000	ADABASE
Virginia				
West Virginia				
EAST SOUTH CENTRAL				
Alabama				
Kentucky	IBM Mainframe, #370	COBOL		
Mississippi				
Tennessee				
WEST SOUTH CENTRAL				
Arkansas	WANG VS 7310	COBOL		
Louisiana			WANG PC	BASIC
Oklahoma				
Texas			UNIVAC 1162	COBOL
MOUNTAIN				
Arizona				
Colorado	IBM 3090	COBOL	WANG VS 100	VARIOUS
Idaho	IBM 370	COBOL		
Montana			IBM PC-AT	BASIC/R base software
Nevada			IBM/PS2	
New Mexico	IBM	VM		
Utah	Amdahl	COBOL		
Wyoming				
PACIFIC				
Alaska	IBM	SAS	IBM-P2/2	WordPerfect, Lotus
California	Amdahl 5890, Amdahl 5200, IBM 4300 & 3890	COBOL, FORTRAN, BASIC	IBM 4341	
Hawaii				
Oregon	IBM 3090/200	COBOL	HARRIS 1600	COBOL
Washington				
TERRITORIES				
Guam				
Puerto Rico				
Virgin Islands				

* New York did not report for fiscal year 1988.

TABLE 68. ADP SERVICES PROVIDED INTERNALLY

Lab & Region (1)	Computer Name and Model (2)	Primary Programming Language (3)	Number of Simultaneous Users Supported (4)	Total (5)	Personnel Required (FTEs)			
					Computer Operators (6)	Programmer/Analyst (7)	Data Entry (8)	Other (9)
TOTAL			737	164.93	17.25	31.72	105.01	10.95
AVERAGE			26	11.00	0.82	1.59	5.25	1.37
NEW ENGLAND			192	59.00	1.50	8.00	49.00	0.50
Connecticut	2 DEC PDP-11/73's, 1 WANG VS 75E	Basic, Cobol	40	6.00	1.00	1.50	3.00	0.50
Massachusetts	IBM ATs, XTs, 386s(including clones) on Novell network	Foxbase	110	45.00	0.00	5.00	40.00	0.00
Maine	Hewlett Packard 1000 series	Fortran, labsam CHP	12	4.00	0.00	1.00	3.00	0.00
New Hampshire				0.00				
Rhode Island	HP 1000 21 MXE	Basic, Pascal	30	4.00	0.50	0.50	3.00	0.00
Vermont				0.00				
MIDDLE ATLANTIC			0	0.00	0.00	0.00	0.00	0.00
New Jersey				0.00				
New York*								
Pennsylvania				0.00				
EAST NORTH CENTRAL			76	8.00	1.00	5.00	0.00	0.00
Illinois	NCR PC 211 network/2 servers -25 work stations	R base for DOS	50	3.00	0.00	3.00	0.00	0.00
Indiana	HP 3357 Lab Automation System	Basic	8	2.00	1.00	1.00	0.00	0.00
Michigan	IBM Perkin - Elmer	Basic, Other	18	1.00	0.00	1.00	0.00	0.00
Ohio	**		0	0.00				
Wisconsin	**		0	0.00				
WEST NORTH CENTRAL			189	16.75	3.50	5.50	7.00	0.75
Iowa	Perkin - Elmer 3230	*C*	64	1.00	0.00	0.50	0.00	0.50
Kansas	HARRIS H700	Info database	48	3.00	0.50	0.50	2.00	0.00
Minnesota	DG-MV8200	Cobol, other	60	4.50	1.00	3.50	0.00	0.00
Missouri	IBM-AT & Neostar	Cobol, D-base	0	1.00	0.00	1.00	0.00	0.00
Nebraska				0.00				
North Dakota	Compag 286	PL/I, Concurrent CPM	13	4.25	1.00	0.00	3.00	0.25
South Dakota	AT&T, IBM	Cobol	4	3.00	1.00	0.00	2.00	0.00
SOUTH ATLANTIC			155	43.13	7.50	5.12	30.51	0.00
Delaware	IBM PC/AT	Basic	NA	NA				
District of Columbia				0.00				
Florida	DEC PDP 11/44, PE LIMS	Fortran, Mumps	20	10.00	2.00	0.00	8.00	0.00
Georgia	IBM/PC-AT	Foxbase+	1	1.13	0.00	0.12	1.01	0.00
Maryland	IBM System 36	Cobol	72	8.00	1.50	1.50	6.00	0.00
North Carolina	WANG VS100	Cobol	55	17.00	3.00	3.00	11.00	0.00
South Carolina	**		0	0.00				
Virginia	NORTH STAR	Dbase III PLUS	3	4.00	1.00	0.00	3.00	0.00
West Virginia	3 - Zenith 158-43 Microcomputer, 1 - HP Vectra Microcomputer	Dbase 3	4	2.00	0.00	0.50	1.50	0.00
EAST SOUTH CENTRAL			5	3.25	0.25	0.00	3.00	0.00
Alabama	**		0	0.00				
Kentucky	Neometrics Neonatal Screening System #2810	Fortran	5	3.25	0.25	0.00	3.00	0.00
Mississippi				0.00				
Tennessee	**		0	0.00				
WEST SOUTH CENTRAL			5	3.00	2.00	0.00	1.00	0.00
Arkansas	**			0.00				
Louisiana	**		NA	0.00				
Oklahoma	IBM AT PC model 339	Dbase III plus	5	3.00	2.00	0.00	1.00	0.00
Texas	**		0	0.00				
MOUNTAIN			50	14.60	0.50	2.60	4.00	7.50
Arizona	**		0	0.00				
Colorado	WANG PC terminals	Cobol	NA	3.00	0.00	0.00	3.00	0.00
Idaho	IBM PCs and compatibles	C & Clipper	17	2.00	0.50	0.50	1.00	0.00
Montana	IBM PC AT	Basic	1	0.60	0.00	0.10	0.00	0.50
Nevada				0.00				
New Mexico	Convergent technologies S-1280		32	9.00	0.00	2.00	0.00	7.00
Utah	**		0	0.00				
Wyoming				0.00				
PACIFIC			65	19.20	1.00	5.50	10.50	2.20
Alaska	**			0.00				
California	PDP 11/34, PERKIN ELMER 3210 (LIMS/CLAS)	Cobol, Basic, Fortran	20	7.00	0.00	1.00	4.00	2.00
Hawaii	IBM PC	Programs	1	NA				
Oregon	UNISYS 80	Cobol, Fortran	14	4.20	1.00	0.50	2.50	0.20
Washington	Prime 550-II	Fortran	30	8.00	0.00	4.00	4.00	0.00
TERRITORIES			0	0.00	0.00	0.00	0.00	0.00
Guam			NA	NA				
Puerto Rico				0.00				
Virgin Islands				0.00				

* New York did not report for fiscal year 1988.

** State laboratory has more than one dedicated computer system.

NOTE: NA = Data not available.

***LABORATORY
SAFETY***

TABLE 69. LABORATORY SAFETY INFORMATION

Lab & Region	Lab Safety Committee, Number of Members	Lab has:			Number of Accidents							
		Lab Safety Officer	Lab Safety Manual	Record of Lab Accidents	Total	Fire	Electric Shock	Cuts, Needle Pricks	Chemical	Infections	Radiological	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
TOTAL	398	42	49	52	329	6	2	198	25	7	0	91
AVERAGE	8.47				7.00	2.00	1.00	4.95	1.39	1.17	0.00	3.79
NEW ENGLAND	65				65	0	0	33	5	0	0	27
Connecticut	11	X	X	X	45	0	0	18	2	0	0	25
Massachusetts	20	X	X	X	4	0	0	3	0	0	0	1
Maine	8	X	X	X	4	0	0	2	2	0	0	0
New Hampshire	9	X	X	X	8	0	0	6	1	0	0	1
Rhode Island	12	X	X	X	4	0	0	4	0	0	0	0
Vermont	5		X	X	0							
MIDDLE ATLANTIC	19				24	0	0	18	1	0	0	5
New Jersey	16	X	X	X	13	0	0	12	1	0	0	0
New York*												
Pennsylvania	3		X	X	11	0	0	6	0	0	0	5
EAST NORTH CENTRAL	60				33	0	0	21	2	1	0	9
Illinois	8	X	X	X	3	0	0	1	1	1	0	0
Indiana	12	X	X	X	14	0	0	8	0	0	0	6
Michigan	10			X	7	0	0	5	0	0	0	2
Ohio	0	X	X	X	3	0	0	2	1	0	0	0
Wisconsin	30	X	X	X	6	0	0	5	0	0	0	1
WEST NORTH CENTRAL	52				30	1	0	21	4	0	0	4
Iowa	7	X	X	X	10	0	0	8	1	0	0	1
Kansas	10	X	X	X	0							
Minnesota	9			X	3	0	0	3	0	0	0	0
Missouri	5		X	X	2	0	0	2	0	0	0	0
Nebraska	4		X	X	0							
North Dakota	9	X	X	X	15	1	0	8	3	0	0	3
South Dakota	8	X	X	X	0	0	0	0	0	0	0	0
SOUTH ATLANTIC	60				30	0	0	19	4	0	0	7
Delaware	4	X	X	X	0							
District of Columbia	8	X	X	X	2	0	0	1	0	0	0	1
Florida	5	X	X	X	NA	NA	NA	NA	NA	NA	NA	NA
Georgia	4	X	X	X	0	0	0	0	0	0	0	0
Maryland	16	X	X	X	3	0	0	3	0	0	0	0
North Carolina	7	X	X	X	13	0	0	9	3	0	0	1
South Carolina	7		X	X	10	0	0	4	1	0	0	5
Virginia	5	X	X	X	0							
West Virginia	8	X	X	X	2	0	0	2	0	0	0	0
EAST SOUTH CENTRAL	12				20	0	0	13	2	0	0	5
Alabama	6	X	X	X	6	0	0	5	1	0	0	0
Kentucky	6	X	X	X	5	0	0	5	0	0	0	0
Mississippi	0		X	X	0	0	0	0	0	0	0	0
Tennessee	0	X	X	X	9	0	0	3	1	0	0	5
WEST SOUTH CENTRAL	43				42	3	1	30	1	0	0	7
Arkansas	13	X	X	X	3	0	1	1	0	0	0	1
Louisiana	5	X	X	X	24	3	0	20	0	0	0	1
Oklahoma	8	X	X	X	4	0	0	4	0	0	0	0
Texas	17	X	X	X	11	0	0	5	1	0	0	5
MOUNTAIN	47				49	0	0	24	1	3	0	21
Arizona	6	X	X	X	14	0	0	6	0	2	0	8
Colorado	9	X	X	X	7	0	0	3	1	0	0	3
Idaho	10	X	X	X	0							
Montana	0			X	6	0	0	3	0	0	0	3
Nevada	5	X	X	X	10	0	0	5	0	1	0	4
New Mexico	5	X	X	X	4	0	0	0	0	0	0	4
Utah	8	X	X	X	3	0	0	2	0	0	0	1
Wyoming	4	X	X	X	5	0	0	5	0	0	0	0
PACIFIC	29				30	2	1	16	3	2	0	8
Alaska	3	X	X	X	2	0	1	1	0	0	0	0
California	14	X	X	X	9	0	0	5	1	1	0	2
Hawaii	0	X	X	X	0							
Oregon	3	X	X	X	3	0	0	2	0	1	0	0
Washington	9	X	X	X	16	2	0	8	2	0	0	4
TERRITORIES	11				6	0	0	3	2	1	0	0
Guam	NA				NA							
Puerto Rico	11	X	X	X	2	0	0	1	1	0	0	0
Virgin Islands	0	X	X	X	4	0	0	2	1	1	0	0

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 69. LABORATORY SAFETY INFORMATION (continued)

Lab & Region	One-pass Air System in High Hazard Areas	Radioactive Material other than RIA Assays or Bactec Systems	Radiation Safety Program
(14)	(15)	(16)	(17)
TOTAL	48		38
NEW ENGLAND			
Connecticut	X	Cs 134 & 137, I 131, Ru 106 & 108, Sr 89 & 90, Ba-La 140, Mn 54, Zn 65, Co 60, Rn 222, Ra 226 & 228, Pu 239, H 3	X
Massachusetts	X	32p	X
Maine	X	Ni 63 Electroncapture detector, Cs 137 120 millicury source for TLD standards	X
New Hampshire	X		
Rhode Island	X		X
Vermont	X	Cd 109, Co 57 & 60, Ce 139, Hg 203, Bi 207, Sn 113, Cs 137, Y 88, Sr 90, Am 241, Eu 152, Ba 135, Gd 148	
MIDDLE ATLANTIC			
New Jersey	X		X
New York*			
Pennsylvania	X		X
EAST NORTH CENTRAL			
Illinois	X	Ni 63	X
Indiana	X		X
Michigan	X	I 125, H 3	X
Ohio	X		X
Wisconsin	X	Standards for Environmental programs - All types	X
WEST NORTH CENTRAL			
Iowa	X	C 14, Cs 137, Ra 226 & 228, Co 60, K 40, I 131	X
Kansas	X	Environmental monitoring standards	X
Minnesota	X	Environmental monitoring	X
Missouri	X		X
Nebraska	X	I 125	X
North Dakota	X	Environmental monitoring	X
South Dakota	X	Am 241	X
SOUTH ATLANTIC			
Delaware	X		
District of Columbia	X		
Florida	X		
Georgia	X		X
Maryland	X		X
North Carolina	X	Chromium 51, Cobalt 60, Zinc 65, Strontium 89/90, Zirconium-Niobium 95, Iodine 131, and Cesium 134 & 137	X
South Carolina	X		
Virginia	X		X
West Virginia			X
EAST SOUTH CENTRAL			
Alabama	X		
Kentucky	X		X
Mississippi	X	I 125 (Genprobe TB)	
Tennessee	X	Radiochemistry standards - I 131, Sr 89, Sr 90, Ra 226, Ra 228, H 3	X
WEST SOUTH CENTRAL			
Arkansas	X	Standards only for radiochemistry; Laboratory - a variety	X
Louisiana	X	H 3, Cr 51, Co 57 & 60, Sr 85,89, & 90, Y 88, Ru 106, Cd 109, Sb 125, I 131, Cs 134 & 137, Hg 203, Ra 226 & 228, Th 230, U 238, Am 241, Cr 139, Eu 154 & 155, Sn 113	X
Oklahoma	X		X
Texas	X		X
MOUNTAIN			
Arizona	X		X
Colorado	X		X
Idaho	X		
Montana			X
Nevada	X	C 14, U 238, Ra 226, Am 241, Sr 90, Cs 137, Ni 63, Po 210	X
New Mexico	X		X
Utah	X	Sr 85 & 90, Th 230 & 232, U natural, Ni 63, Am 241, Ra 226 & 228, Cs 134 & 137, Co 57 & 60, Pu 239 & 241, Ce 137, Sc 46, Be 7, Zn 65, Ba 133 & 140, Bi 207, Na 22, Ag 110, Ru 106, Cr 51, H 3, Tu 228	X
Wyoming			
PACIFIC			
Alaska	X		
California	X	H 3, C 14, S 35, Pu 242, U 283	X
Hawaii	X		
Oregon	X		X
Washington	X	H 3, C 14, Mn 54, Co 57,58, & 60, Zn 65, Sr 85, 89, & 90, Ru 103 & 106, Ca 109, Ba 133, Ce 134, 137, & 144, Eu 152, Ra 228, Th 230 & 232, U 232, 234, 235, & 238, Pl 239 & 242, Am 241 & 243	X
TERRITORIES			
Guam			
Puerto Rico			
Virgin Islands	X		

* New York did not report for fiscal year 1988.

***LABORATORY
PERSONNEL AND
STAFFING PATTERNS***

TABLE 70. NUMBER OF BUDGETED POSITIONS

Lab & Region (1)	Total Budgeted Positions (2)	Management			Clerical			Professional & Technical		
		Number (3)	Percent of total (4)	Number of Vacancies (5)	Number (6)	Percent of total (7)	Number of Vacancies (8)	Number (9)	Percent of total (10)	Number of Vacancies (11)
TOTAL	5,882.92	515.45	8.79%	27.30	741.69	12.65%	50.50	3,721.28	63.47%	280.88
AVERAGE	110.62	9.73		0.52	13.99		0.95	70.21		4.92
NEW ENGLAND	681.70	39.50	5.97%	1.00	82.50	12.47%	3.00	429.70	64.94%	21.00
Connecticut	228.00	8.00	3.49%	0.00	27.00	11.79%	1.00	168.00	73.36%	6.00
Massachusetts	215.00	13.50	6.28%	0.00	30.00	13.95%	1.00	115.00	53.49%	3.00
Maine	52.50	2.00	3.81%	0.00	9.00	17.14%	1.00	35.50	67.62%	3.00
New Hampshire	35.90	4.00	11.14%	0.00	4.50	12.53%	0.00	23.90	66.57%	2.00
Rhode Island	90.00	4.00	4.44%	0.00	7.00	7.78%	0.00	65.00	72.22%	5.00
Vermont	39.30	8.00	20.36%	1.00	5.00	12.72%	0.00	22.30	56.74%	2.00
MIDDLE ATLANTIC	308.00	41.00	13.31%	1.00	37.00	12.01%	1.00	192.00	62.34%	2.00
New Jersey	244.00	23.00	9.43%	0.00	26.00	10.66%	0.00	183.00	66.80%	0.00
New York*										
Pennsylvania	64.00	18.00	28.13%	1.00	11.00	17.19%	1.00	29.00	45.31%	2.00
EAST NORTH CENTRAL	925.35	121.80	13.16%	6.30	97.00	10.48%	12.50	543.35	58.72%	56.65
Illinois	119.00	14.00	11.76%	1.00	12.00	10.08%	2.00	71.00	59.66%	8.00
Indiana	118.10	10.00	8.81%	0.00	12.00	10.34%	0.00	74.70	64.34%	1.00
Michigan	290.00	47.00	16.21%	4.00	22.00	7.59%	8.00	157.00	54.14%	27.00
Ohio	125.00	7.00	5.60%	0.00	20.00	16.00%	1.00	74.00	59.20%	6.00
Wisconsin	275.25	43.80	15.91%	1.30	31.00	11.26%	1.50	166.65	60.54%	14.85
WEST NORTH CENTRAL	490.60	62.50	12.74%	3.00	62.30	12.70%	1.00	295.63	60.26%	15.00
Iowa	129.05	11.00	8.52%	0.00	17.15	13.29%	1.00	78.53	60.85%	5.00
Kansas	72.00	10.00	13.89%	2.00	7.00	9.72%	0.00	48.00	66.67%	5.00
Minnesota	99.75	23.00	23.06%	1.00	8.75	8.77%	0.00	50.00	50.13%	1.00
Missouri	83.00	5.00	6.02%	0.00	14.00	16.87%	0.00	55.00	66.27%	2.00
Nebraska	26.50	3.50	13.21%	0.00	4.40	16.60%	0.00	15.10	56.98%	0.00
North Dakota	51.30	9.00	17.54%	0.00	7.00	13.65%	0.00	30.00	58.48%	2.00
South Dakota	29.00	1.00	3.45%	0.00	4.00	13.79%	0.00	19.00	65.52%	0.00
SOUTH ATLANTIC	1,312.50	72.90	5.55%	6.00	207.00	15.77%	10.00	869.60	66.28%	45.80
Delaware	50.50	2.90	5.74%	0.00	6.00	11.88%	0.00	33.60	66.53%	3.00
District of Columbia	46.00	8.00	17.39%	0.00	5.00	10.87%	0.00	29.00	63.04%	0.00
Florida	327.00	21.00	6.42%	3.00	59.00	18.04%	1.00	221.00	67.58%	16.00
Georgia	128.00	9.00	7.03%	1.00	27.00	21.09%	5.00	62.00	48.44%	5.00
Maryland	334.00	4.00	1.20%	2.00	45.00	13.47%	0.00	254.00	76.05%	11.00
North Carolina	178.00	9.00	5.06%	0.00	26.00	14.61%	1.00	115.00	64.61%	4.80
South Carolina	100.00	8.00	8.00%	0.00	17.00	17.00%	3.00	57.00	57.00%	3.00
Virginia	94.00	6.00	6.38%	0.00	14.00	14.89%	0.00	63.00	67.02%	0.00
West Virginia	55.00	5.00	9.09%	0.00	8.00	14.55%	0.00	35.00	63.64%	3.00
EAST SOUTH CENTRAL	428.50	37.50	8.75%	0.00	55.00	12.84%	2.00	281.00	65.58%	14.00
Alabama	136.00	4.00	2.94%	0.00	21.00	15.44%	0.00	96.00	70.59%	0.00
Kentucky	88.50	6.50	7.34%	0.00	10.00	11.31%	0.00	42.00	47.58%	0.00
Mississippi	49.00	2.00	4.08%	0.00	8.00	16.33%	0.00	33.00	67.35%	3.00
Tennessee	175.00	25.00	14.29%	0.00	16.00	9.14%	2.00	110.00	62.86%	11.00
WEST SOUTH CENTRAL	459.00	32.00	6.97%	2.00	42.00	9.15%	6.00	301.00	65.58%	27.00
Arkansas	95.00	3.00	3.16%	0.00	12.00	12.63%	0.00	69.00	72.63%	8.00
Louisiana	130.00	13.00	10.00%	1.00	21.00	16.15%	5.00	78.00	60.00%	12.00
Oklahoma	41.00	3.00	7.32%	0.00	4.00	9.76%	0.00	32.00	78.05%	0.00
Texas	193.00	13.00	6.74%	1.00	5.00	2.59%	1.00	122.00	63.21%	7.00
MOUNTAIN	440.65	50.25	11.40%	5.00	55.39	12.57%	2.00	286.78	65.08%	15.00
Arizona	78.00	7.00	8.97%	1.00	11.00	14.10%	1.00	49.00	62.82%	6.00
Colorado	72.00	12.00	16.67%	1.00	10.00	13.89%	0.00	49.00	68.06%	1.00
Idaho	60.65	9.00	14.84%	0.00	9.39	15.48%	0.00	37.26	61.43%	2.00
Montana	24.00	2.00	8.33%	0.00	3.00	12.50%	0.00	19.00	79.17%	0.00
Nevada	32.00	4.25	13.28%	0.00	4.00	12.50%	0.00	12.50	39.06%	0.00
New Mexico	91.00	7.00	7.69%	3.00	7.00	7.69%	1.00	64.00	70.33%	6.00
Utah	63.00	5.00	7.94%	0.00	9.00	14.29%	0.00	44.00	69.84%	0.00
Wyoming	20.00	4.00	20.00%	0.00	2.00	10.00%	0.00	12.00	60.00%	0.00
PACIFIC	685.12	34.00	4.96%	2.00	88.50	12.92%	7.00	440.72	64.33%	41.21
Alaska	38.00	3.00	7.89%	0.00	11.00	28.95%	2.00	15.00	39.47%	1.00
California	431.40	13.00	3.01%	0.00	54.50	12.63%	3.00	283.00	65.60%	33.00
Hawaii	68.72	0.00	0.00%	0.00	5.00	7.28%	2.00	63.72	92.72%	7.21
Oregon	50.00	8.00	16.00%	0.00	8.00	16.00%	0.00	23.00	46.00%	0.00
Washington	97.00	10.00	10.31%	2.00	10.00	10.31%	0.00	58.00	57.73%	0.00
TERRITORIES	151.50	24.00	15.84%	1.00	15.00	9.90%	6.00	81.50	53.80%	23.00
Guam	12.00	2.00	16.67%	1.00	0.00	0.00%	0.00	10.00	83.33%	0.00
Puerto Rico	124.50	22.00	17.67%	0.00	12.00	9.64%	4.00	59.50	47.79%	17.00
Virgin Islands	15.00	0.00	0.00%	0.00	3.00	20.00%	2.00	12.00	80.00%	6.00

* New York did not report for fiscal year 1988.

TABLE 70. NUMBER OF BUDGETED POSITIONS (continued)

Lab & Region	Total Budgeted Positions	Support Services			Maintenance			Total Filled Positions	
		Number	Percent of total	Number of Vacancies	Number	Percent of total	Number of Vacancies	Number	Percent of total
(1)	(2)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
TOTAL	5,662.92	796.68	13.59%	34.50	87.54	1.49%	2.00	6,487.96	93.60%
AVERAGE	110.62	15.04		0.65	1.65		0.04	103.55	
NEW ENGLAND	661.70	84.00	12.69%	4.50	26.00	3.93%	1.00	631.20	95.39%
Connecticut	229.00	24.00	10.48%	0.00	2.00	0.87%	0.00	222.00	96.94%
Massachusetts	215.00	34.50	16.05%	4.00	22.00	10.23%	1.00	206.00	95.81%
Maine	52.50	6.00	11.43%	0.00	0.00	0.00%	0.00	48.50	92.38%
New Hampshire	35.90	3.50	9.75%	0.50	0.00	0.00%	0.00	33.40	93.04%
Rhode Island	90.00	12.00	13.33%	0.00	2.00	2.22%	0.00	85.00	94.44%
Vermont	39.30	4.00	10.18%	0.00	0.00	0.00%	0.00	36.30	92.37%
MIDDLE ATLANTIC	308.00	37.00	12.01%	0.00	1.00	0.32%	0.00	304.00	98.70%
New Jersey	244.00	32.00	13.11%	0.00	0.00	0.00%	0.00	244.00	100.00%
New York*									
Pennsylvania	64.00	5.00	7.81%	0.00	1.00	1.56%	0.00	60.00	93.75%
EAST NORTH CENTRAL	925.35	151.20	16.34%	6.00	12.00	1.30%	1.00	842.90	91.09%
Illinois	119.00	21.00	17.65%	1.00	1.00	0.84%	1.00	106.00	89.08%
Indiana	116.10	17.40	14.99%	1.00	2.00	1.72%	0.00	114.10	98.28%
Michigan	290.00	61.00	21.03%	4.00	3.00	1.03%	0.00	247.00	85.17%
Ohio	125.00	19.00	15.20%	0.00	5.00	4.00%	0.00	118.00	94.40%
Wisconsin	275.25	32.80	11.92%	0.00	1.00	0.36%	0.00	257.80	93.66%
WEST NORTH CENTRAL	490.60	65.88	13.43%	1.00	4.29	0.87%	0.00	470.60	95.92%
Iowa	129.05	20.33	15.75%	0.00	2.04	1.58%	0.00	123.05	95.35%
Kansas	72.00	7.00	9.72%	0.00	0.00	0.00%	0.00	65.00	90.28%
Minnesota	99.75	18.00	18.05%	0.00	0.00	0.00%	0.00	97.75	97.99%
Missouri	83.00	8.00	9.64%	1.00	1.00	1.20%	0.00	80.00	96.39%
Nebraska	26.50	3.50	13.21%	0.00	0.00	0.00%	0.00	26.50	100.00%
North Dakota	51.30	5.05	9.84%	0.00	0.25	0.49%	0.00	49.30	96.10%
South Dakota	29.00	4.00	13.79%	0.00	1.00	3.45%	0.00	29.00	100.00%
SOUTH ATLANTIC	1,312.50	146.00	11.12%	4.00	17.00	1.30%	0.00	1,248.70	94.99%
Delaware	50.50	7.00	13.86%	0.00	1.00	1.98%	0.00	47.50	94.06%
District of Columbia	46.00	4.00	8.70%	0.00	0.00	0.00%	0.00	46.00	100.00%
Florida	327.00	25.00	7.65%	0.00	1.00	0.31%	0.00	307.00	93.88%
Georgia	128.00	29.00	22.66%	0.00	1.00	0.78%	0.00	117.00	91.41%
Maryland	334.00	27.00	8.08%	0.00	4.00	1.20%	0.00	321.00	96.11%
North Carolina	178.00	25.00	14.04%	2.00	3.00	1.69%	0.00	170.20	95.62%
South Carolina	100.00	13.00	13.00%	2.00	5.00	5.00%	0.00	92.00	92.00%
Virginia	94.00	11.00	11.70%	0.00	0.00	0.00%	0.00	94.00	100.00%
West Virginia	55.00	5.00	9.09%	0.00	2.00	3.64%	0.00	52.00	94.55%
EAST SOUTH CENTRAL	428.50	43.00	10.04%	2.00	12.00	2.80%	0.00	410.50	95.80%
Alabama	136.00	4.00	2.94%	0.00	11.00	8.09%	0.00	136.00	100.00%
Kentucky	68.50	9.00	13.14%	0.00	1.00	1.46%	0.00	68.50	100.00%
Mississippi	49.00	6.00	12.24%	0.00	0.00	0.00%	0.00	46.00	93.88%
Tennessee	175.00	24.00	13.71%	2.00	0.00	0.00%	0.00	160.00	91.43%
WEST SOUTH CENTRAL	459.00	83.00	18.08%	7.00	1.00	0.22%	0.00	417.00	90.85%
Arkansas	95.00	11.00	11.58%	0.00	0.00	0.00%	0.00	87.00	91.58%
Louisiana	130.00	18.00	13.85%	1.00	0.00	0.00%	0.00	111.00	85.38%
Oklahoma	41.00	2.00	4.88%	0.00	0.00	0.00%	0.00	41.00	100.00%
Texas	193.00	52.00	26.94%	6.00	1.00	0.52%	0.00	178.00	92.23%
MOUNTAIN	440.65	43.00	9.76%	2.00	5.25	1.19%	0.00	416.65	94.55%
Arizona	78.00	9.00	11.54%	0.00	2.00	2.56%	0.00	70.00	89.74%
Colorado	72.00	1.00	1.39%	0.00	0.00	0.00%	0.00	70.00	97.22%
Idaho	60.65	3.00	4.95%	0.00	2.00	3.30%	0.00	58.65	96.70%
Montana	24.00	0.00	0.00%	0.00	0.00	0.00%	0.00	24.00	100.00%
Nevada	32.00	11.00	34.38%	1.00	0.25	0.78%	0.00	31.00	96.88%
New Mexico	91.00	12.00	13.19%	1.00	1.00	1.10%	0.00	80.00	87.91%
Utah	63.00	5.00	7.94%	0.00	0.00	0.00%	0.00	63.00	100.00%
Wyoming	20.00	2.00	10.00%	0.00	0.00	0.00%	0.00	20.00	100.00%
PACIFIC	685.12	116.90	17.06%	6.00	5.00	0.73%	0.00	628.91	91.80%
Alaska	38.00	9.00	23.68%	0.00	0.00	0.00%	0.00	35.00	92.11%
California	431.40	80.90	18.75%	5.00	0.00	0.00%	0.00	390.40	90.50%
Hawaii	68.72	0.00	0.00%	0.00	0.00	0.00%	0.00	59.51	13.79%
Oregon	50.00	11.00	22.00%	0.00	0.00	0.00%	0.00	50.00	100.00%
Washington	97.00	16.00	16.49%	1.00	5.00	5.15%	0.00	94.00	96.91%
TERRITORIES	151.50	27.00	17.82%	2.00	4.00	2.64%	0.00	119.50	78.88%
Guam	12.00	0.00	0.00%	0.00	0.00	0.00%	0.00	11.00	91.67%
Puerto Rico	124.50	27.00	21.69%	2.00	4.00	3.21%	0.00	101.50	81.53%
Virgin Islands	15.00	0.00	0.00%	0.00	0.00	0.00%	0.00	7.00	46.67%

* New York did not report for fiscal year 1988.

TABLE 71. TURNOVER

Lab & Region (1)	Total Positions Staffed (2)	Total Number Resignations and Separations (3)	Percent Turnover Filled Positions (4)	Management (5)	Clerical (6)	Prof. and Tech. Positions		Percent Turnover (9)	Supportive Services (10)	Maintenance (11)
						Number of Budgeted Positions (7)	Resignations & Separations (8)			
TOTAL	5,850.42	637.40	10.89%	34.00	102.00	3,773.78	391.40	10.37%	101.00	9.00
AVERAGE	110.39	12.03		0.64	1.92	71.20	7.38		1.91	0.17
NEW ENGLAND	652.20	81.50	12.50%	2.00	18.00	429.70	43.50	10.12%	14.00	4.00
Connecticut	222.00	17.00	7.66%	0.00	6.00	168.00	8.00	4.76%	3.00	0.00
Massachusetts	215.00	38.50	17.91%	1.00	9.00	115.00	15.50	13.48%	9.00	4.00
Maine	52.50	2.00	3.81%	0.00	0.00	35.50	2.00	5.63%	0.00	0.00
New Hampshire	33.40	7.00	20.96%	0.00	1.00	23.90	6.00	25.10%	0.00	0.00
Rhode Island	90.00	10.00	11.11%	0.00	1.00	65.00	7.00	10.77%	2.00	0.00
Vermont	39.30	7.00	17.81%	1.00	1.00	22.30	5.00	22.42%	0.00	0.00
MIDDLE ATLANTIC	308.00	4.00	1.30%	1.00	1.00	192.00	2.00	6.90%	0.00	0.00
New Jersey	244.00	0.00	0.00%	0.00	0.00	163.00	0.00	0.00%	0.00	0.00
New York*										
Pennsylvania	64.00	4.00	6.25%	1.00	1.00	29.00	2.00	6.90%	0.00	0.00
EAST NORTH CENTRAL	925.35	67.40	7.28%	4.00	11.00	543.35	42.40	7.80%	10.00	0.00
Illinois	119.00	13.00	10.92%	0.00	1.00	71.00	9.00	12.68%	3.00	0.00
Indiana	116.10	17.40	14.99%	0.00	4.00	74.70	11.40	15.28%	2.00	0.00
Michigan	290.00	11.00	3.79%	3.00	3.00	157.00	3.00	1.91%	2.00	0.00
Ohio	125.00	5.00	4.00%	0.00	1.00	74.00	4.00	5.41%	0.00	0.00
Wisconsin	275.25	21.00	7.63%	1.00	2.00	166.65	15.00	9.00%	3.00	0.00
WEST NORTH CENTRAL	480.60	55.00	11.21%	3.00	7.00	346.15	34.00	9.82%	10.00	1.00
Iowa	129.05	20.00	15.50%	0.00	3.00	129.05	12.00	9.30%	4.00	1.00
Kansas	72.00	12.00	16.67%	0.00	1.00	48.00	10.00	20.83%	1.00	0.00
Minnesota	99.75	8.00	8.02%	1.00	0.00	50.00	5.00	10.00%	2.00	0.00
Missouri	83.00	7.00	8.43%	1.00	1.00	55.00	2.00	3.64%	3.00	0.00
Nebraska	26.50	2.00	7.55%	0.00	1.00	15.10	1.00	6.82%	0.00	0.00
North Dakota	51.30	6.00	11.70%	1.00	1.00	30.00	4.00	13.33%	0.00	0.00
South Dakota	29.00	0.00	0.00%	0.00	0.00	19.00	0.00	0.00%	0.00	0.00
SOUTH ATLANTIC	1,309.50	150.00	11.45%	10.00	23.00	869.60	101.00	11.61%	15.00	1.00
Delaware	50.50	8.00	15.84%	0.00	1.00	33.60	4.00	11.90%	3.00	0.00
District of Columbia	46.00	0.00	0.00%	0.00	0.00	29.00	0.00	0.00%	0.00	0.00
Florida	327.00	40.00	12.23%	3.00	5.00	221.00	30.00	13.57%	2.00	0.00
Georgia	128.00	17.00	13.28%	0.00	5.00	82.00	7.00	11.29%	5.00	0.00
Maryland	334.00	43.00	12.87%	2.00	6.00	254.00	35.00	13.78%	0.00	0.00
North Carolina	178.00	28.00	14.61%	4.00	4.00	115.00	14.00	12.17%	4.00	0.00
South Carolina	100.00	13.00	13.00%	1.00	2.00	57.00	8.00	14.04%	1.00	1.00
Virginia	94.00	0.00	0.00%	0.00	0.00	63.00	0.00	0.00%	0.00	0.00
West Virginia	52.00	3.00	5.77%	0.00	0.00	35.00	3.00	8.57%	0.00	0.00
EAST SOUTH CENTRAL	428.50	57.00	13.30%	3.00	11.00	281.00	34.00	12.10%	7.00	2.00
Alabama	136.00	18.00	13.24%	1.00	6.00	96.00	7.00	7.29%	2.00	2.00
Kentucky	68.50	4.00	5.84%	0.00	0.00	42.00	4.00	9.52%	0.00	0.00
Mississippi	49.00	5.00	10.20%	0.00	1.00	33.00	2.00	6.06%	2.00	0.00
Tennessee	175.00	30.00	17.14%	2.00	4.00	110.00	21.00	19.09%	3.00	0.00
WEST SOUTH CENTRAL	459.00	103.00	22.44%	3.00	7.00	301.00	66.00	21.93%	27.00	0.00
Arkansas	95.00	19.00	20.00%	0.00	2.00	69.00	16.00	23.19%	1.00	0.00
Louisiana	130.00	15.00	11.54%	2.00	1.00	78.00	11.00	14.10%	1.00	0.00
Oklahoma	41.00	4.00	9.76%	0.00	0.00	32.00	4.00	12.50%	0.00	0.00
Texas	193.00	65.00	33.68%	1.00	4.00	122.00	35.00	28.69%	25.00	0.00
MOUNTAIN	440.65	55.50	12.60%	6.00	7.00	286.78	36.50	12.73%	5.00	1.00
Arizona	78.00	16.50	21.15%	0.00	3.00	49.00	11.50	23.47%	1.00	1.00
Colorado	72.00	12.00	16.67%	1.00	2.00	49.00	9.00	18.37%	0.00	0.00
Idaho	60.65	0.00	0.00%	0.00	0.00	37.26	0.00	0.00%	0.00	0.00
Montana	24.00	3.00	12.50%	0.00	0.00	19.00	3.00	15.79%	0.00	0.00
Nevada	32.00	1.00	3.13%	0.00	0.00	12.50	0.00	0.00%	1.00	0.00
New Mexico	91.00	22.00	24.18%	4.00	2.00	64.00	13.00	20.31%	3.00	0.00
Utah	63.00	0.00	0.00%	NA	NA	44.00	NA	0.00%	NA	NA
Wyoming	20.00	1.00	5.00%	1.00	0.00	12.00	0.00	0.00%	0.00	0.00
PACIFIC	685.12	58.00	8.47%	2.00	16.00	440.72	27.00	6.13%	13.00	0.00
Alaska	38.00	7.00	18.42%	0.00	2.00	15.00	2.00	13.33%	3.00	0.00
California	431.40	23.00	5.33%	0.00	8.00	283.00	11.00	3.89%	4.00	0.00
Hawaii	68.72	7.00	10.19%	0.00	2.00	63.72	5.00	7.85%	0.00	0.00
Oregon	50.00	14.00	28.00%	0.00	4.00	23.00	5.00	10.00%	5.00	0.00
Washington	97.00	7.00	7.22%	2.00	0.00	56.00	4.00	7.14%	1.00	0.00
TERRITORIES	151.50	6.00	3.96%	0.00	1.00	83.50	5.00	5.99%	0.00	0.00
Guam	12.00	0.00	0.00%	0.00	0.00	12.00	0.00	0.00%	0.00	0.00
Puerto Rico	124.50	0.00	0.00%	0.00	0.00	59.50	0.00	0.00%	0.00	0.00
Virgin Islands	15.00	6.00	40.00%	0.00	1.00	12.00	5.00	41.67%	0.00	0.00

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

TABLE 72. STAFFING PATTERN OF PROFESSIONAL AND TECHNICAL PERSONNEL

Lab & Region (1)	Diagnostic Bacteriology		Mycology		Parasitology		Virology		Immunology		Hematology	
	Number (2)	Changes (3)	Number (4)	Changes (5)	Number (6)	Changes (7)	Number (8)	Changes (9)	Number (10)	Changes (11)	Number (12)	Changes (13)
TOTAL	514.21	-4.95	69.55	-0.95	60.48	-0.40	321.73	27.10	311.13	36.54	58.55	-1.75
NEW ENGLAND	51.90	-1.30	9.20	2.00	6.10	0.00	29.80	7.60	34.00	-3.25	1.00	0.00
Connecticut	14.00	0.00	1.00	0.00	4.00	0.00	8.00	4.00	14.00	0.00	1.00	0.00
Massachusetts	20.00	-1.00	2.00	1.00	1.00	0.00	8.00	-1.00	11.00	-1.50	0.00	0.00
Maine	7.00	0.00	(2)**		(2)**		5.50	0.00	(8)**		0.00	0.00
New Hampshire	4.40	-0.30	0.20	0.00	0.10	0.00	4.80	4.10	3.00	-1.75	0.00	0.00
Rhode Island	6.50	0.00	0.50	0.00	1.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00
Vermont	(4)**		5.50	1.00	(4)**		3.50	0.50	(8)**		0.00	0.00
MIDDLE ATLANTIC	21.00	0.00	6.00	0.00	1.00	0.00	26.00	0.00	13.00	0.00	2.00	0.00
New Jersey	21.00	0.00	1.00	0.00	1.00	0.00	19.00	0.00	13.00	0.00	0.00	0.00
New York*												
Pennsylvania	(4)**		5.00	0.00	(4)**		7.00	0.00	(8)**		2.00	0.00
EAST NORTH CENTRAL	70.00	6.00	8.00	0.00	8.00	-3.00	62.80	10.80	51.00	4.00	1.00	0.00
Illinois	16.00	0.00	1.00	0.00	1.00	0.00	2.00	0.00	12.00	2.00	0.00	0.00
Indiana	9.00	6.00	1.00	0.00	2.00	-3.00	13.30	0.30	(8)**	0.00	0.00	0.00
Michigan	25.50	2.50	1.00	0.00	1.00	0.00	22.50	12.50	7.00	0.00	0.00	0.00
Ohio	10.00	0.00	1.00	0.00	1.00	0.00	7.00	0.00	5.00	0.00	1.00	0.00
Wisconsin	9.50	-2.50	4.00	0.00	3.00	0.00	18.00	-2.00	27.00	2.00	0.00	0.00
WEST NORTH CENTRAL	34.20	0.10	2.80	0.00	6.40	1.00	29.33	-0.35	22.68	1.49	3.00	0.00
Iowa	4.80	0.60	1.00	0.00	1.00	0.00	7.08	0.65	4.58	-0.51	0.00	0.00
Kansas	7.00	0.00	1.00	0.00	3.00	1.00	4.00	0.00	3.00	1.00	0.00	0.00
Minnesota	8.00	-0.50	0.00	0.00	0.00	0.00	10.00	-1.00	(8)**		0.00	0.00
Missouri	8.00	0.00	0.50	0.00	1.50	0.00	5.00	0.00	9.00	1.00	0.00	0.00
Nebraska	1.90	0.00	0.00	0.00	0.20	0.00	0.00	0.00	1.50	0.00	0.00	0.00
North Dakota	2.50	0.00	0.30	0.00	0.70	0.00	2.25	0.00	1.60	0.00	0.00	0.00
South Dakota	2.00	0.00	(2)**		(2)**		1.00	0.00	3.00	0.00	3.00	0.00
SOUTH ATLANTIC	138.35	-4.85	5.35	-0.95	7.40	0.10	60.30	3.65	73.05	19.30	31.30	0.00
Delaware	8.20	0.00	0.10	0.00	0.40	0.00	8.80	3.00	1.70	0.00	3.55	0.00
District of Columbia	3.50	0.00	0.00	0.00	0.00	0.00	0.50	0.00	3.50	0.00	2.00	0.00
Florida	NA		NA		NA		NA		NA		NA	
Georgia	19.50	0.50	1.00	-0.25	4.00	0.35	7.00	1.65	14.75	3.50	4.75	0.00
Maryland	40.00	-7.00	1.00	0.00	1.00	0.00	33.00	-1.00	19.00	14.00	5.00	-4.00
North Carolina	8.25	0.25	1.25	0.00	1.50	-0.25	7.50	0.00	9.50	0.00	8.00	3.00
South Carolina	10.00	0.00	2.00	-0.70	0.50	0.00	3.50	0.00	11.00	1.20	8.00	1.00
Virginia	42.50	2.00	(2)**		(2)**		(2)**		11.00	0.00	0.00	0.00
West Virginia	6.40	-0.60	(2)**		(2)**		(2)**		2.60	0.60	0.00	0.00
EAST SOUTH CENTRAL	66.00	1.00	3.50	0.00	5.50	0.00	10.50	0.40	30.00	0.50	5.25	0.25
Alabama	28.00	1.00	2.00	0.00	3.00	0.00	5.00	0.00	18.00	0.00	4.00	1.00
Kentucky	4.00	0.00	0.00	0.00	1.00	0.00	2.50	0.40	5.00	0.50	1.25	-0.75
Mississippi	NA		NA		NA		NA		NA		NA	
Tennessee	34.00	0.00	1.50	0.00	1.50	0.00	3.00	0.00	7.00	0.00	0.00	0.00
WEST SOUTH CENTRAL	61.00	9.00	5.00	0.00	10.00	1.00	22.00	0.00	43.00	9.00	7.00	-2.00
Arkansas	11.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	8.00	0.00	1.00	0.00
Louisiana	18.00	9.00	1.00	0.00	2.00	1.00	3.00	0.00	15.00	4.00	0.00	-2.00
Oklahoma	16.00	1.00	1.00	0.00	1.00	0.00	4.00	1.00	7.00	3.00	0.00	0.00
Texas	16.00	-1.00	2.00	0.00	6.00	0.00	14.00	-1.00	13.00	2.00	6.00	0.00
MOUNTAIN	22.76	-1.40	9.10	-1.00	5.80	0.50	25.00	0.00	17.50	6.00	2.00	0.00
Arizona	(6)**		2.00	-1.00	2.00	0.00	5.00	-1.00	4.00	4.00	0.00	0.00
Colorado	3.10	0.00	0.10	0.00	0.80	0.00	1.00	0.00	4.00	0.00	1.00	0.00
Idaho	7.66	-0.40	1.00	0.00	0.00	0.00	3.00	0.00	1.00	0.00	0.00	0.00
Montana	(4)**		3.00	0.00	(4)**		5.00	2.00	(8)**		0.00	0.00
Nevada	1.50	0.00	0.50	0.00	1.50	0.00	(10)**	0.00	2.50	0.00	0.50	0.00
New Mexico	8.50	0.00	0.50	0.00	(2)**		8.00	0.00	(8)**		0.00	0.00
Utah	1.00	-1.00	1.00	0.00	1.00	0.50	3.00	-1.00	5.00	2.00	0.00	0.00
Wyoming	1.00	0.00	1.00	0.00	0.50	0.00	0.00	0.00	1.00	0.00	0.50	0.00
PACIFIC	39.00	-13.50	19.60	-1.00	7.28	0.00	52.00	5.00	25.90	-0.50	0.00	0.00
Alaska	4.00	-4.50	0.50	0.00	2.00	0.00	4.00	0.00	3.00	-0.50	0.00	0.00
California	18.50	2.00	6.50	0.00	0.00	0.00	35.00	2.00	13.50	0.00	0.00	0.00
Hawaii	(4)**		11.60	-1.00	3.28	0.00	(10)**		5.40	0.00	0.00	0.00
Oregon	4.00	0.00	0.00	0.00	1.00	0.00	5.00	0.00	4.00	0.00	0.00	0.00
Washington	12.50	-11.00	1.00	0.00	1.00	0.00	8.00	3.00	0.00	0.00	0.00	0.00
TERRITORIES	10.00	0.00	1.00	0.00	3.00	0.00	4.00	0.00	1.00	0.00	6.00	0.00
Guam	4.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	2.00	0.00
Puerto Rico	2.00	0.00	0.00	0.00	2.00	0.00	3.00	0.00	0.00	0.00	2.00	0.00
Virgin Islands	4.00		(2)**		(14)**		(14)**		(14)**		2.00	0.00

* New York did not report for fiscal year 1988.

** Personnel are included in entry of column number.

NOTE: NA = Data not available.

TABLE 72. STAFFING PATTERN OF PROFESSIONAL AND TECHNICAL PERSONNEL (continued)

Lab & Region (1)	Clinical Chemistry		Pathology		Environmental Microbiology		Environmental Chemistry		Occupational Safety & Health	
	(14) Number	(15) Changes	(16) Number	(17) Changes	(18) Number	(19) Changes	(20) Number	(21) Changes	(22) Number	(23) Changes
TOTAL	312.21	13.43	64.50	-7.50	271.63	2.28	869.75	43.57	58.51	-23.11
NEW ENGLAND	24.00	1.00	0.00	0.00	37.30	0.45	92.00	1.00	4.40	-0.10
Connecticut	15.00	1.00	0.00	0.00	8.00	0.00	48.00	0.00	2.00	0.00
Massachusetts	5.00	0.00	0.00	0.00	6.00	0.00	10.00	-1.00	0.00	0.00
Maine	0.00	0.00	0.00	0.00	12.00	0.00	(18)**		(24)**	
New Hampshire	0.00	0.00	0.00	0.00	3.50	0.45	(18)**		0.90	-0.10
Rhode Island	4.00	0.00	0.00	0.00	6.00	0.00	25.00	0.00	1.00	0.00
Vermont	0.00	0.00	0.00	0.00	1.80	0.00	9.00	2.00	0.50	0.00
MIDDLE ATLANTIC	14.00	0.00	0.00	0.00	3.00	0.00	52.00	0.00	14.00	0.00
New Jersey	13.00	0.00	0.00	0.00	3.00	0.00	52.00	0.00	13.00	0.00
New York*										
Pennsylvania	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
EAST NORTH CENTRAL	53.00	-2.00	17.50	-0.50	37.60	2.10	105.95	-4.15	21.00	-1.00
Illinois	10.00	0.00	0.00	0.00	9.00	0.00	12.00	0.00	0.00	0.00
Indiana	0.00	0.00	0.00	0.00	13.60	2.10	30.30	-3.30	0.00	0.00
Michigan	14.50	0.50	0.00	0.00	5.00	0.00	15.00	4.00	0.00	0.00
Ohio	8.00	0.00	0.00	0.00	7.00	0.00	18.00	0.00	1.00	0.00
Wisconsin	20.50	-2.50	17.50	-0.50	3.00	0.00	30.65	-4.85	20.00	-1.00
WEST NORTH CENTRAL	26.86	2.18	0.00	0.00	19.70	-1.27	120.01	-0.49	6.35	-1.01
Iowa	6.06	1.18	0.00	0.00	3.50	-0.27	41.61	-0.49	4.40	-1.01
Kansas	4.00	0.00	0.00	0.00	3.00	-1.00	15.00	-1.00	1.00	0.00
Minnesota	5.00	1.00	0.00	0.00	(20)**		27.00	0.00	0.00	0.00
Missouri	10.00	0.00	0.00	0.00	6.00	0.00	10.00	1.00	0.00	0.00
Nebraska	0.80	0.00	0.00	0.00	2.00	0.00	6.40	0.00	0.70	0.00
North Dakota	1.00	0.00	0.00	0.00	3.20	0.00	15.00	0.00	0.25	0.00
South Dakota	(12)**		0.00	0.00	2.00	0.00	5.00	0.00	0.00	0.00
SOUTH ATLANTIC	61.35	6.25	40.00	-7.00	49.30	-10.00	109.79	14.00	7.01	-1.00
Delaware	2.85	0.00	0.00	-4.00	3.80	0.00	2.79	0.00	0.01	0.00
District of Columbia	3.00	0.00	3.00	0.00	0.50	0.00	1.00	0.00	0.00	0.00
Florida	NA		NA		NA		NA		NA	
Georgia	11.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maryland	28.00	7.00	10.00	-4.00	14.00	-10.00	70.00	7.00	7.00	0.00
North Carolina	12.00	-1.00	24.00	1.00	8.00	0.00	25.00	4.00	0.00	-1.00
South Carolina	(12)**		0.00	0.00	4.00	-1.00	6.00	3.00	(20)**	
Virginia	0.50	0.00	0.00	0.00	9.00	0.00	0.00	0.00	0.00	0.00
West Virginia	4.00	0.00	3.00	0.00	10.00	1.00	5.00	0.00	0.00	0.00
EAST SOUTH CENTRAL	26.00	4.00	0.00	0.00	27.00	0.50	37.00	0.00	2.00	0.00
Alabama	9.00	0.00	0.00	0.00	12.00	0.00	0.00	0.00	0.00	0.00
Kentucky	12.00	4.00	0.00	0.00	3.00	0.00	2.00	0.00	2.00	0.00
Mississippi	NA		NA		NA		NA		NA	
Tennessee	5.00	0.00	0.00	0.00	12.00	0.50	35.00	0.00	0.00	0.00
WEST SOUTH CENTRAL	33.00	2.00	0.00	0.00	35.00	9.00	66.00	-3.00	1.00	0.00
Arkansas	6.00	0.00	0.00	0.00	13.00	0.00	20.00	0.00	0.00	0.00
Louisiana	6.00	2.00	0.00	0.00	18.00	9.00	12.00	-4.00	0.00	0.00
Oklahoma	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Texas	19.00	0.00	0.00	0.00	4.00	0.00	34.00	1.00	1.00	0.00
MOUNTAIN	19.00	0.00	6.00	0.00	22.30	1.50	88.80	-1.00	2.75	1.00
Arizona	0.00	0.00	0.00	0.00	5.50	1.50	24.50	1.00	1.00	1.00
Colorado	9.00	0.00	0.00	0.00	2.00	0.00	16.50	0.00	0.50	0.00
Idaho	0.00	0.00	3.00	0.00	4.80	0.00	2.80	0.00	0.00	0.00
Montana	2.00	0.00	0.00	0.00	2.00	0.00	5.00	0.00	0.00	0.00
Nevada	0.00	0.00	0.00	0.00	1.50	0.00	4.00	0.00	0.25	0.00
New Mexico	4.00	0.00	3.00	0.00	4.50	0.00	19.00	0.00	(20)**	
Utah	4.00	0.00	0.00	0.00	1.00	0.00	17.00	-2.00	1.00	0.00
Wyoming	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
PACIFIC	48.00	0.00	0.00	0.00	17.43	0.00	177.70	37.21	0.00	-21.00
Alaska	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00
California	35.00	0.00	0.00	0.00	0.00	0.00	131.50	17.00	0.00	-21.00
Hawaii	0.00	0.00	0.00	0.00	12.23	0.00	24.20	1.21	0.00	0.00
Oregon	6.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
Washington	7.00	0.00	0.00	0.00	3.00	0.00	22.00	18.00	0.00	0.00
TERRITORIES	7.00	0.00	1.00	0.00	23.00	0.00	20.50	0.00	0.00	0.00
Guam	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Puerto Rico	2.00	0.00	0.00	0.00	22.00	0.00	20.50	0.00	0.00	0.00
Virgin Islands	4.00	0.00	1.00	0.00	(16)**		0.00	0.00	0.00	0.00

* New York did not report for fiscal year 1988.

** Personnel are included in entry of column number.

NOTE: NA = Data not available.

TABLE 72. STAFFING PATTERN OF PROFESSIONAL AND TECHNICAL PERSONNEL (continued)

Lab & Region (1)	Toxicology		Lab Improvement Program		Biologic, Reagent, Media Prod.		Research and Development		Total Prof. and Tech. Positions Reported in Workload Categories (32)	Total Net Changes Reported (33)
	Number (24)	Changes (25)	Number (26)	Changes (27)	Number (28)	Changes (29)	Number (30)	Changes (31)		
TOTAL	210.31	-5.30	147.70	-1.35	169.00	6.23	28.00	-1.00	3,467.26	82.84
NEW ENGLAND	90.90	-3.00	12.10	0.10	34.00	-7.50	3.00	0.00	429.70	-3.00
Connecticut	39.00	0.00	9.00	0.00	5.00	0.00	0.00	0.00	188.00	5.00
Massachusetts	22.00	-3.00	1.00	0.00	26.00	-7.50	3.00	1.00	115.00	-13.00
Maine	7.00	0.00	1.00	0.00	3.00	0.00	0.00	-1.00	35.50	-1.00
New Hampshire	6.90	0.00	0.10	0.10	0.00	0.00	0.00	0.00	23.90	2.60
Rhode Island	14.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	65.00	0.00
Vermont	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.30	3.50
MIDDLE ATLANTIC	12.00	0.00	28.00	0.00	0.00	0.00	0.00	0.00	192.00	0.00
New Jersey	7.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	163.00	0.00
New York*										
Pennsylvania	5.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00	29.00	0.00
EAST NORTH CENTRAL	19.50	-0.50	23.50	2.00	63.50	0.50	1.00	-1.00	543.35	13.25
Illinois	0.00	0.00	8.00	1.00	0.00	0.00	0.00	0.00	71.00	3.00
Indiana	1.50	1.50	3.00	1.00	0.00	-3.00	1.00	-1.00	74.70	0.60
Michigan	0.00	0.00	5.00	0.00	60.50	3.50	(2)**		157.00	23.00
Ohio	8.00	0.00	4.00	0.00	3.00	0.00	0.00	0.00	74.00	0.00
Wisconsin	10.00	-2.00	3.50	0.00	0.00	0.00	0.00	0.00	166.65	-13.35
WEST NORTH CENTRAL	6.90	0.00	11.40	-1.00	8.00	0.23	0.00	0.00	295.63	0.88
Iowa	0.00	0.00	2.00	0.00	2.50	0.23	0.00	0.00	78.53	0.38
Kansas	1.00	0.00	6.00	0.00	0.00	0.00	0.00	0.00	48.00	0.00
Minnesota	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	-0.50
Missouri	0.00	0.00	3.00	-1.00	2.00	0.00	0.00	0.00	55.00	1.00
Nebraska	0.90	0.00	0.20	0.00	0.50	0.00	0.00	0.00	15.10	0.00
North Dakota	2.00	0.00	0.20	0.00	1.00	0.00	0.00	0.00	30.00	0.00
South Dakota	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.00	0.00
SOUTH ATLANTIC	23.50	0.50	22.90	4.00	17.00	13.00	2.00	2.00	648.60	39.00
Delaware	1.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	33.60	-1.00
District of Columbia	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.00	0.00
Florida	NA		NA		NA		NA		NA	NA
Georgia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	62.00	6.00
Maryland	2.00	0.00	9.00	4.00	13.00	13.00	2.00	2.00	254.00	21.00
North Carolina	2.00	1.00	8.00	0.00	0.00	0.00	0.00	0.00	115.00	7.00
South Carolina	6.50	-0.50	2.50	0.00	3.00	0.00	0.00	0.00	57.00	3.00
Virginia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	63.00	2.00
West Virginia	0.00	0.00	3.00	0.00	1.00	0.00	0.00	0.00	35.00	1.00
EAST SOUTH CENTRAL	5.00	0.00	8.25	-0.75	22.00	1.00	2.00	0.00	248.00	9.90
Alabama	0.00	0.00	2.00	0.00	13.00	1.00	0.00	0.00	96.00	3.00
Kentucky	5.00	0.00	2.25	-0.75	0.00	0.00	2.00	0.00	42.00	3.40
Mississippi	NA		NA		NA		NA		NA	NA
Tennessee	0.00	0.00	2.00	0.00	9.00	0.00	0.00	0.00	110.00	0.50
WEST SOUTH CENTRAL	7.00	0.00	3.00	-1.00	8.00	0.00	0.00	-1.00	301.00	23.00
Arkansas	5.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	69.00	0.00
Louisiana	1.00	0.00	0.00	-1.00	2.00	1.00	0.00	-1.00	78.00	18.00
Oklahoma	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	32.00	5.00
Texas	1.00	0.00	0.00	0.00	6.00	-1.00	0.00	0.00	122.00	0.00
MOUNTAIN	40.00	-2.00	15.75	-1.00	8.00	-1.00	0.00	0.00	284.78	1.80
Arizona	0.00	0.00	5.00	-1.00	0.00	-1.00	0.00	0.00	49.00	3.50
Colorado	10.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	49.00	0.00
Idaho	12.00	-2.00	2.00	0.00	0.00	0.00	0.00	0.00	37.26	-2.40
Montana	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	19.00	2.00
Nevada	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	12.50	0.00
New Mexico	10.00	0.00	3.50	0.00	3.00	0.00	0.00	0.00	64.00	0.00
Utah	4.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	42.00	-1.50
Wyoming	4.00	0.00	1.00	0.00	2.00	0.00	0.00	0.00	12.00	0.00
PACIFIC	1.51	-0.30	23.80	-3.70	10.50	0.00	18.00	-1.00	440.72	1.21
Alaska	0.50	-0.30	0.80	-2.70	0.00	0.00	0.00	0.00	15.00	-8.00
California	0.00	0.00	23.00	0.00	2.00	0.00	18.00	0.00	283.00	0.00
Hawaii	1.01	0.00	(24)**		6.00	0.00	0.00	0.00	63.72	0.21
Oregon	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	23.00	0.00
Washington	(20)**	0.00	0.00	-1.00	1.50	0.00	(8)**	-1.00	56.00	9.00
TERRITORIES	4.00	0.00	1.00	0.00	0.00	0.00	2.00	0.00	83.50	0.00
Guam	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.00	0.00
Puerto Rico	3.00	0.00	1.00	0.00	0.00	0.00	2.00	0.00	59.50	0.00
Virgin Islands	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.00	0.00

* New York did not report for fiscal year 1988.

** Personnel are included in entry of column number.

NOTE: NA = Data not available.

***LABORATORY
ORGANIZATIONAL
STRUCTURE***

TABLE 73. CHANGES IN LABORATORY ORGANIZATIONAL STRUCTURE

Lab & Region	Date of Current Organization Chart		Organization Structure Changed During FY 1988	Description of Organizational Change
	State Health Department	State Laboratory		
(1)	(2)	(3)	(4)	(5)
NEW ENGLAND				
Connecticut	06/30/88	06/30/88	X	The CT State Health Lab is now a bureau headed by a chief responsible to the commissioner or his deputy rather than a division director responsible to the Chief of Health Promotion; 5 directors, 1 per division: biological sciences, environmental chemistry, organic chemistry, toxicology, and laboratory standards.
Massachusetts	8/28/84	01/89		
Maine	9/21/88	NO DATE		
New Hampshire	12/20/82	08/84		
Rhode Island	10/87	NO DATE		
Vermont	FY85/88	FY1987		
MIDDLE ATLANTIC				
New Jersey	NO DATE	NO DATE		
New York*				
Pennsylvania	10/85	03/88		
EAST NORTH CENTRAL				
Illinois	NO DATE	NO DATE		
Indiana	12/87	10/83	X	Chemistry was divided into 2 branches: inorganic chemistry and organic chemistry.
Michigan	05/87	10/03/88		
Ohio	12/31/87	09/30/88		
Wisconsin	NA	NO DATE		
WEST NORTH CENTRAL				
Iowa	NA	03/01/88	X	N.P. Moyer was named permanent coordinator for Bureau of Disease Control.
Kansas	10/88	12/02/88		
Minnesota	05/88	05/27/88	X	Methods development unit, chemical labs was added. Clinical Labs Improvement program was eliminated.
Missouri	09/01/88	NA		
Nebraska	NO DATE	FY 1989		
North Dakota	08/01/88	07/01/88		
South Dakota	NA	NA		
SOUTH ATLANTIC				
Delaware	NO DATE	11/01/85		
District of Columbia	NA	NA		
Florida	02/88	02/88		
Georgia	09/86	06/30/88	X	Clinical chemistry supervisor position was established which will lead to formation of a hemoglobinopathy confirmatory lab. Computer service was moved from Lab Support Service to Field Lab Service. Training/safety function was added to central Newborn Screening Lab. Acting deputy director position was defined.
Maryland	07/18/83	08/15/84	X	Office of Epidemiology and Disease Control, the Drug Control program, and the Food Control and Consumer Health Program have become part of the Laboratories Administration under the new title, "Community Health Surveillance and Laboratories Administration".
North Carolina	04/01/88	04/01/88		
South Carolina	09/01/85	NO DATE	X	Asst. chief given line authority of all division directors.
Virginia	NO DATE	08/29/88		
West Virginia	06/87	01/87		
EAST SOUTH CENTRAL				
Alabama	8/18/88	FY88		
Kentucky	02/88	NO DATE		
Mississippi	6/30/88	11/1/87		
Tennessee	08/85	09/02/88		
WEST SOUTH CENTRAL				
Arkansas	08/01/88	07/01/88	X	Division of Health facilities was transferred from the Bureau of Environmental Services to the Bureau of Health Resources.
Louisiana	01/87	12/19/84		
Oklahoma	02/84	NO DATE		
Texas	01/88	09/01/88		
MOUNTAIN				
Arizona	NA	01/27/88		
Colorado	09/01/88	NO DATE	X	Chemistry has been consolidated by sample type (organic/inorganic) rather than program subrator.
Idaho	NO DATE	NO DATE	X	The forensic section was transferred to the Dept. of Law Enforcement 7/1/88.
Montana	07/87	04/88		
Nevada	NA	NA		
New Mexico	NA	02/08/89		
Utah	01/84	05/01/86		
Wyoming	NO DATE	NO DATE		
PACIFIC				
Alaska	NO DATE	04/89		
California	11/87	02/08/88		
Hawaii	06/30/88	12/21/88		
Oregon	NA	01/01/87		
Washington	NO DATE	10/09/87		
TERRITORIES				
Guam	NA	NO DATE		
Puerto Rico	11/30/87	11/30/87		
Virgin Islands	01/86	01/86		

* New York did not report for fiscal year 1988.

NOTE: NA = Data not available.

NOTES AND DEFINITIONS

Every attempt has been made to ensure the accuracy of the raw data which are included in this report. However, because of the various accounting practices employed, great diversity exists among Association laboratories. Therefore, the reader is advised to exercise great care in making comparative analyses without first consulting the laboratory director involved.

An "average," in a table, is the total divided by the number of participating laboratories reporting activity in a given category or subcategory.

SYMBOLS

Basically, the data display format is the same as that of previous CAR reports. The following matrix identifies the symbols found in this edition.

<i>Symbol</i>	<i>Meaning and Purpose</i>
Blank or 0	A report with no activity for that particular item
X	A positive response
NA	The laboratory reported that data were not available.

THE FOLLOWING DEFINITIONS APPLY TO TABLES 1 THROUGH 53:

Workload

Workload is reported by the number of specimens/samples in each category or subcategory. Workload includes procedures routinely followed in the laboratory. It does not include those procedures that the laboratory has the capability of performing but does not do on a routine basis. Routine tests are those tests performed as part of a standard operating procedure on a specimen or sample.

Specimen/Sample

Any material received in the laboratory for testing in a workload category or subcategory or a material which is divided into aliquots for testing in multiple categories or subcategories is counted as one specimen for each category or subcategory. Specimens collected from the same site on the same patient (or same environmental source) at the same time are to be counted as one specimen in each category or subcategory in which it is tested. The term "specimen" indicates an animal or human source, while "sample" indicates an environmental source.