CONSOLIDATED ANNUAL REPORT

on State and Territorial Public Health Laboratories

Fiscal Year 1977

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
CENTER FOR DISEASE CONTROL
ATLANTA, GEORGIA 30333

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April 1977

A Collaborative Compilation
by the
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Center for Disease Control
Bureau of Laboratories
Atlanta, Georgia 30333
and the
Association of State and Territorial
Public Health Laboratory Directors

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INTRODUCTION

This, the fourteenth edition of the Consolidated Annual Report (CAR), provides quantitative information about laboratory personnel, expenditures, source of funds and services identified in fifteen workload areas. This information is provided by the Association of State and Territorial Public Health Laboratory Directors (ASTPHLD). The ASTPHLD consists of the public health laboratories in each of the fifty states, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. 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 Officers and the Center for Disease Control, Bureau of Laboratories.

Fifty-two of the fifty-four member laboratories provided data for this edition. Pennsylvania and the Virgin Islands did not report to the CAR for fiscal year 1977. New York reported only diagnostic workload information, omitting all personnel and financial data. Therefore, national totals reflected in this report represent only 51 state/territorial laboratories in the personnel and financial section and 52 in the workload reporting section.

The CAR deals with personnel, financial, and workload activities of the ASTPHLD. Therefore, this report understates the additional resources expended on public health laboratories service in nearly every state/territory having local health departments. It totally omits those funds expended for public health laboratory services by other state/territorial agencies. 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 the ASTPHLD as any material received in the laboratory for testing in a workload category or sub-category or a material which is divided into aliquots for testing in multiple categories or sub-categories and is counted as one specimen for each category or sub-category. 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 sub-category 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 sub-category in the fifteen 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 1977 CAR was composed of four sections: (1) workload recording, (2) personnel, (3) financial, and (4) special questions. The *Workload Recording Section* requested specific data concerning routine laboratory procedures and the number of specimen/samples tested under each procedure. 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 (FTE) full-time equivalent or man-year equivalent because the standard work week differs among reporting laboratories in terms of number of hours worked. The *Financial Section* requested data in three areas: (1) expenditure, (2) source of funds, and (3) allocations of expenditure data into workload categories. This

procedure enabled the presentation of expenditure and source of funding information by each Association laboratory. Expenditure data allocated by workload category were omitted from this report because fewer than half of the participating laboratories were able to provide workload expenditure data in the requested format. In the 1978 edition, the workload expenditure questionnaire will be revised in an effort to improve both the format and accuracy of data in this area. The *Special Questions Section* requested information concerning current laboratory organizational structure, laboratory data for existing and new facilities, current energy conservation management activities, workload measurement structure and normal work week.

NOTE: DATA COMPARISONS

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

Basically, the data display format is the same as that of the FY 1976 CAR. The following matrix shows the uses of symbols found in this edition.

SYMBOL	MEANING AND PURPOSE
(Blank)	Not available
*	Footnote
–	A report with no activity for that particular item
X	A positive response

The term "specimen" indicates an animal or human source, while "sample" indicates an environmental source; however, in Tables 1-2 through 1-5 the term "specimens" refers to both human sources and environmental samples.

The CAR was initiated by the ASTPHLD in 1963. The report is designed to provide comprehensive data concerning state and territorial laboratories on a state basis to the ASTPHLD.

The Consolidated Annual Report is a joint activity of the ASTPHLD and the CDC, Bureau of Laboratories. Because it is compiled by CDC personnel all comments, suggestions, and correspondence on its contents should be forwarded to:

Center for Disease Control
Attn: CAR Editor
Laboratory Management
Consultation Office, BL
Chamblee 29-9
Atlanta, Georgia 30333

March 28, 1978

To Readers of the Consolidated Annual Report

The intent and purpose of the Consolidated Annual Report is to provide data for planning, management and evaluation to the members of the Association of State and Territorial Public Health Laboratory Directors.

Some readers have attempted to utilize the summary tables for comparison of specific state laboratories in relation to the national average and by rank. Comparisons were made as to expenditures, personnel, specimen load and services without studying the data in the detailed tables or consulting the state laboratory director. The conclusions reached were not valid as the comparisons were in error due to lack of knowledge of the state laboratory activities and budgetary system.

The CAR Committee strongly recommends that readers exercise caution when utilizing the summary tables in making comparisons between state laboratories and that the individual state laboratory director be consulted regarding the use of the comparative data.

Frank P. Pauls.

Frank P. Pauls, Dr. P.H.
Chairman, CAR Committee

SECTION I
SUMMARY TABLES

Table 1 - 1

SPECIMENS/SAMPLES RECEIVED BY THE STATE AND TERRITORIAL PUBLIC HEALTH LABORATORIES

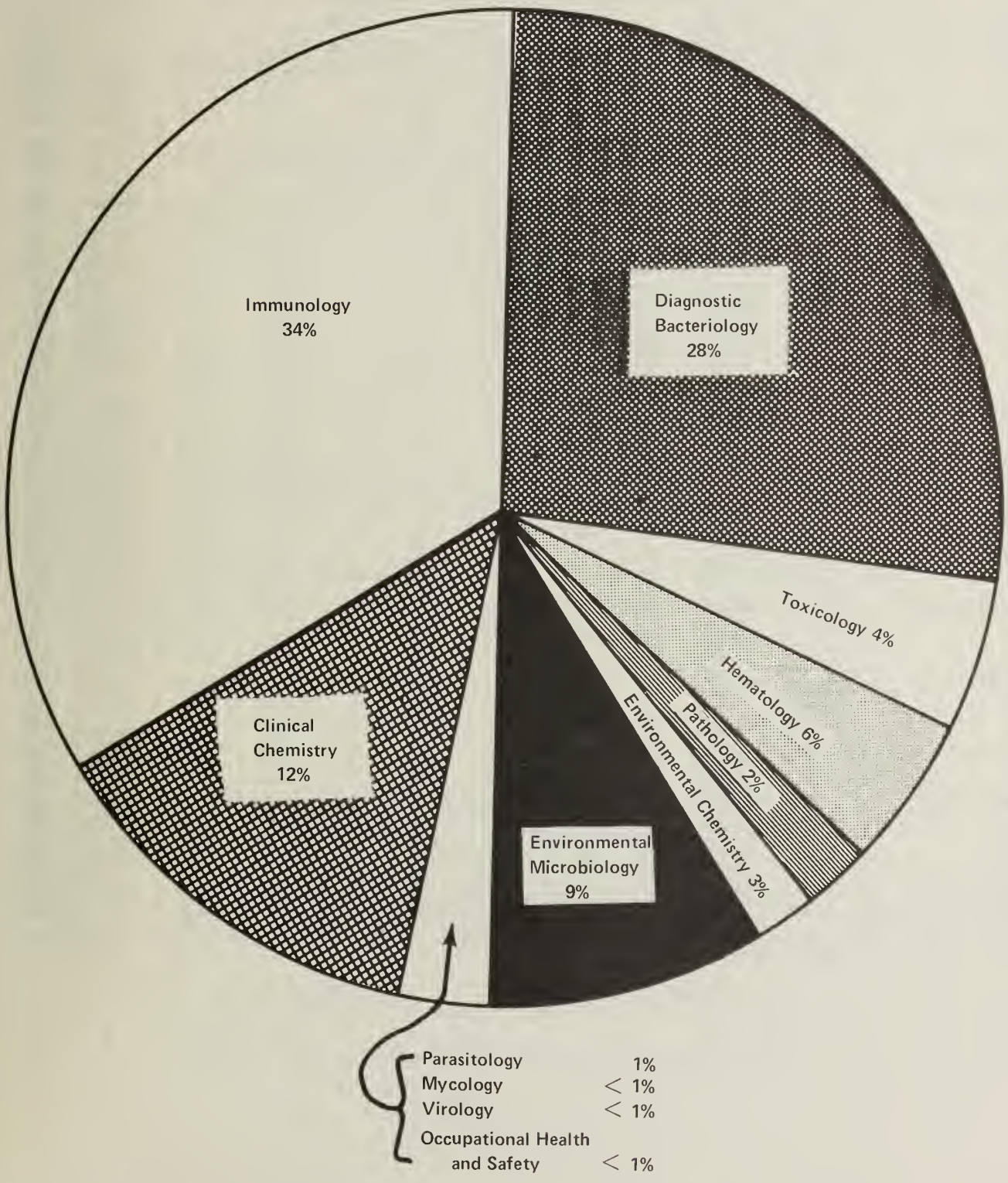

Table 1-2
Summary of Laboratory Expenditures, Positions, and Specimens

Lab. & Region	Population X 1000	Expenditure		Laboratory Personnel						Specimens	
				Filled Positions			Filled Prof. & Tech. Positions				
		Total Laboratory	Expenditure Per Capita	Filled Positions	Positions To Population X 1000	Expenditure Per Position	Filled Positions	Positions To Population X 1000	Expenditure Per Position	Total Lab. Specimens	Specimens Per Capita
Total	**186,226**	**101,039,869**		**5,715.18**			**3,548.08**			**27,310,164**	
Average		1,981,174	.5425	112.06	1:32,584	17,679	69.57	1:52,486	28,477		.1339
New England	**12,198**	**9,880,052**	**.8100**	**649.35**	**1:18,785**	**15,215**	**374.35**	**1:32,584**	**26,393**	**2,271,758**	**.1862**
Conn.	3,095	3,443,715	1.1127	226.20	1:13,682	15,224	133.2	1:23,236	25,854	675,864	.2184
Mass.	5,828	3,121,830	.5357	226.25	1:25,759	13,798	110.25	1:52,861	28,316	815,243	.1398
Me.	1,059	734,876	.6939	49	1:21,612	14,997	31	1:34,161	23,706	153,651	.1451
N.H.	818	290,393	.3550	20	1:40,900	14,520	12	1:68,167	24,199	136,326	.1667
R.I.	927	1,908,787	2.0591	99	1:9,364	19,281	68	1:13,632	28,070	333,669	.3699
Vt.	471	380,451	.8077	28.9	1:16,298	13,164	19.9	1:23,668	19,118	157,006	.3333
Middle Atlantic	**7,316**	**4,063,802**	**.5555**	**233**	**1:31,399**	**17,441**	**156**	**1:46,897**	**26,050**	**1,350,865**	**.0531**
N.J.	7,316	4,063,802	.5555	233	1:31,399	17,441	156	1:46,897	26,050	777,591	.1063
N.Y.	18,120*									573,274	.0316
Pa.											
East North Central	**40,979**	**19,424,906**	**.4740**	**1032.75**	**1:39,679**	**18,809**	**607.15**	**1:67,494**	**31,994**	**3,058,305**	**.0746**
Ill.	11,145	2,589,143	.2323	150	1:74,300	17,261	92	1:121,141	28,143	500,906	.0449
Ind.	5,311	1,731,529	.3260	92	1:57,728	18,821	59	1:90,017	29,348	184,286	.0347
Mich.	9,157	9,598,973	1.0483	446.5	1:20,508	21,498	252.9	1:36,208	37,956	1,001,162	.1093
Ohio	10,759	2,423,829	.2253	183	1:58,792	13,245	108	1:99,620	22,443	723,802	.0627
Wisc.	4,607	3,081,432	.6689	161.25	1:28,571	19,110	95.25	1:48,367	32,351	648,150	.1407
West North Central	**16,690**	**7,082,999**	**.4244**	**412.4**	**1:40,470**	**17,175**	**262.4**	**1:63,605**	**26,993**	**2,108,334**	**.1263**
Ia.	2,870	2,252,118	.7847	104	1:27,596	21,655	67	1:42,836	33,614	444,672	.1649
Kans.	2,267	1,377,509	.6076	80.4	1:28,197	17,133	51.4	1:44,105	26,800	314,806	.1389
Minn.	3,926	1,369,170	.3487	86	1:45,651	15,921	47	1:83,532	29,131	530,682	.1361
Mo.	4,763	837,045	.1757	55	1:86,600	15,219	39	1:122,128	21,463	380,640	.0799
Nabr.	1,546	387,082	.2504	32	1:48,313	12,096	21	1:73,619	18,432	146,297	.0940
N.D.	635	518,035	.8158	35	1:18,143	14,801	23	1:27,609	22,623	178,712	.2814
S.D.	683	342,040	.5008	20	1:34,150	17,102	14	1:48,786	24,431	113,626	.1664
South Atlantic	**33,715**	**21,096,897**	**.6257**	**1362.3**	**1:24,749**	**15,486**	**916.3**	**1:36,795**	**23,023**	**7,406,294**	**.2197**
Del.	579	474,066	.8188	32.1	1:18,037	14,768	22.1	1:26,199	21,461	160,982	.2807
D.C.	716	1,166,864	1.6297	61	1:11,738	19,129	50	1:14,320	23,337	326,441	.4646
Fla.	8,357	3,727,734	.4460	247	1:33,834	15,092	157	1:53,229	23,743	1,993,701	.2386
Ga.	4,926	2,085,717	.4234	139	1:35,439	15,005	71	1:69,380	29,376	961,161	.1961
Md.	4,098	3,741,252	.9129	263	1:15,582	14,225	189	1:21,683	19,796	1,288,987	.3146
N.C.	5,451	2,343,180	.4299	138	1:39,500	16,980	87	1:62,655	26,933	909,798	.1669
S.C.	2,818	1,510,696	.5361	123.2	1:22,873	12,262	83.2	1:33,870	18,167	724,766	.2671
Va.	4,967	5,105,000	1.0278	303	1:16,393	16,848	226	1:21,978	22,588	812,260	.1636
W.Va.	1,803	942,388	.5227	56	1:32,196	16,828	31	1:58,161	30,400	239,240	.1327
East South Central	**13,544**	**7,358,163**	**.5433**	**470.5**	**1:28,786**	**15,639**	**294**	**1:46,068**	**25,028**	**3,251,753**	**.2400**
Ala.	3,614	2,818,275	.7798	188	1:19,223	14,991	121	1:29,868	23,292	1,307,764	.3619
Ky.	3,396	1,621,000	.4773	80.5	1:42,186	20,137	57	1:59,579	28,439	302,679	.0891
Miss.	2,346	771,285	.3288	52	1:45,115	14,832	33	1:71,091	23,372	838,806	.3676
Tenn.	4,188	2,147,603	.5128	150	1:27,920	14,317	83	1:50,468	25,875	802,606	.1916
West South Central	**20,855**	**7,565,877**	**.3628**	**452**	**1:46,139**	**16,739**	**271.5**	**1:76,814**	**27,867**	**4,386,247**	**.2103**
Ark.	2,116	714,664	.3377	53	1:39,925	13,484	35	1:60,457	20,419	364,750	.1724
La.	3,791	1,953,692	.5154	151	1:25,106	12,938	70	1:54,157	27,910	644,379	.1700
Okla.	2,712	856,322	.3158	53	1:51,170	16,157	34.5	1:78,609	24,821	398,641	.1470
Tex.	12,237	4,041,199	.3302	195	1:62,754	20,724	132	1:92,705	30,615	2,978,498	.2434
Mountain	**9,644**	**7,535,233**	**.7813**	**400.08**	**1:24,105**	**18,834**	**249.88**	**1:38,595**	**30,155**	**1,765,720**	**.1831**
Ariz.	2,224	1,145,869	.5152	63	1:35,302	18,188	35	1:63,543	32,739	161,436	.0726
Colo.	2,534	1,373,421	.5420	60	1:42,233	20,890	46	1:55,087	29,857	539,904	.2131
Ida.	820	1,457,103	1.7770	76.5	1:10,719	19,047	48	1:17,083	30,356	167,277	.1912
Mont.	748	323,893	.4330	28.88	1:25,900	11,215	18.88	1:39,619	17,155	99,496	.1330
Nev.	592	471,841	.7970	27	1:21,926	17,476	13	1:45,538	36,295	154,120	.2603
N.M.	1,147	1,308,000	1.1404	69	1:16,623	18,957	36	1:31,861	36,333	256,295	.2234
Utah	1,206	1,103,750	.9152	61	1:19,770	18,094	43	1:28,047	25,669	189,209	.1669
Wyom.	374	351,356	.9395	14.7	1:25,442	23,902	10	1:37,400	36,136	207,984	.5661
Pacific	**28,234**	**16,021,437**	**.5675**	**574.8**	**1:49,120**	**27,873**	**345.5**	**1:81,719**	**46,372**	**1,282,368**	**.0454**
Alaska	352	1,171,177	3.3272	36.3	1:9,697	32,264	12	1:29,333	97,598	183,180	.5203
Cal.	21,185	11,441,273	.5401	365	1:58,041	31,346	227	1:93,326	50,402	157,983	.0075
Hawaii	865	912,672	1.0551	54.5	1:15,872	16,746	37.5	1:23,067	24,338	303,498	.3509
Ore.	2,288	1,042,615	.4557	52	1:44,000	20,050	34	1:67,294	30,665	486,735	.2127
Wash.	3,544	1,453,700	.4102	67	1:52,896	21,697	35	1:101,257	41,534	151,132	.0426
Territories	**3,051**	**1,010,503**	**.3312**	**128**	**1:2,384**	**7,895**	**71**	**1:42,972**	**14,233**	**428,479**	**.1405**
Guam	100	130,108	1.3011	13	1:7,692	10,008	10	1:10,000	13,011	15,777	.1678
P.R.	2,951	880,395	.2983	115	1 25,661	7,656	61	1.48,377	14,433	412,702	.1399
V.I.											

*Population for N.Y. used only in specimen per capita computation.

Table 1-3
National Ranking of State & Territorial Public Health Laboratories by Expenditures, Positions, and Specimens*

Rank	Expenditures				Laboratory Personnel												Specimens			
	Total Laboratory X1000		Expenditure Per Capita		Filled Positions						Filled Prof. & Tech. Positions						Total Lab. Specimens X1000		Specimens Per Capita	
					Filled Positions		Positions To Pop.		Expenditure Per Position		Filled Positions		Positions To Pop.		Expenditure Per Position					
	State	$	State	Ratio	State	#	State	Ratio (X1000)	State	$	State	=	State	Ratio (X1000)	State	$	State	#	State	Ratio
Total		**101,040**				**5,715.18**						**3,548.08**						**27,361**		
Average		1,981		.5425		112.06		1:33		17,679		69.57		1:52		28,477		526		.1339
1	Cal.	11,441	Alaska	3.3272	Mich.	446.5	R.I.	1: 9	Alaska	32,264	Mich.	225.9	Guam	1:10	Alaska	97,598	Tex.	2,979	Wyom.	.5561
2	Mich.	9,599	R.I.	2.0591	Cal.	365	Alaska	1:10	Cal.	31,346	Cal.	227	R.I.	1:14	Cal.	50,402	Fla.	1,994	Alaska	.5203
3	Va.	5,105	Ida.	1.7770	Va.	303	Ida.	1:11	Wyom.	23,902	Va.	226	D.C.	1:14	Wash.	41,534	Ala.	1,308	D.C.	.4545
4	N.J.	4,064	D.C.	1.6297	Md.	263	D.C.	1:12	Wash.	21,697	Md.	189	Ida	1:17	Mich.	37,956	Md.	1,289	Ale.	.3619
5	Tex.	4,041	N.M.	1.1404	Fla.	247	Conn.	1:14	Ia.	21,655	Fla.	157	Md.	1:22	N.M.	36,333	Mich.	1,001	R.I.	.3599
6	Md.	3,741	R.I.	1.3011	N.J.	233	Md.	1:16	Mich.	21,498	N.J.	156	Va.	1:22	Nev.	36,295	Ga.	961	Miss.	.3575
7	Fla.	3,728	Mass.	1.1127	Mass.	266.25	Hawaii	1:16	Colo.	20,890	Conn.	133.2	Hawaii	1:23	Wyom.	35,136	N.C.	910	Hawaii	.3509
8	Conn.	3,444	Hawaii	1.0551	Conn.	266.2	Vt.	1:16	Tex.	20,724	Tex.	132	Conn.	1:23	Ia.	33,614	Miss.	839	Vt.	.3333
9	Mass.	3,122	Mich.	1.0483	Tex.	195	Va.	1:16	Ky.	20,137	Ala.	121	Vt.	1:24	Ariz.	32,739	Mass.	815	Md.	.3145
10	Wisc.	3,081	Va.	1.0278	Ale.	188	N.M.	1:17	Ore.	20,050	Mass.	110.25	Del.	1:26	Wisc.	32,351	Ve.	812	N.D.	.2814
11	Ala.	2,818	Wyom.	.9395	Ohio	183	Del.	1:18	R.I.	19,281	Ohio	108	N.D.	1:28	Ore.	30,665	Tenn.	803	Del.	.2607
12	Ill.	2,589	Utah	.9152	Wisc.	161.25	N.D.	1:18	D.C.	19,129	Wisc.	95.25	Utah	1:28	Tex.	30,615	N.J.	778	Nev.	.2603
13	Ohio	2,424	Md.	.9129	La.	151	Ala.	1:19	Wisc.	19,110	Ill.	92	Alaska	1:29	W.Va.	30,400	S.C.	725	S.C.	.2571
14	N.C.	2,343	Del.	.8188	Tenn.	150	Utah	1:20	Ida.	19,047	N.C.	87	Ala.	1:30	Ida.	30,356	Ohio	724	Tex.	.2434
15	Ia.	2,252	N.D.	.8158	Ill.	150	Mich.	1:21	N.M.	18,957	S.C.	83.2	N.M.	1:32	Colo.	29,857	Conn.	676	Fla.	.2386
16	Tenn.	2,148	Vt.	.8077	Ga.	139	Me.	1:22	Ind.	18,821	Tenn.	83	S.C.	1:34	Ga.	29,376	Wisc.	648	N.M.	.2234
17	Ga.	2,086	Nev.	.7970	N.C.	138	Nev.	1:22	Ariz.	18,188	Ga.	71	Me.	1:34	Ind.	29,343	La.	644	Conn.	.2184
18	La.	1,954	Ia.	.7847	S.C.	123.2	S.C.	1:23	Utah	18,094	La.	70	Mich.	1:36	Minn.	29,131	N.Y.	573	Colo.	.2131
19	R.I.	1,909	Ala.	.7798	P.R.	115	La.	1:25	Nev.	17,476	R.I.	68	Wyom.	1:37	Ky.	28,439	Colo.	540	Ore.	.2127
20	Ind.	1,732	Me.	.6939	Ia.	104	Wyom.	1:25	N.J.	17,441	Ia.	67	Mont.	1:40	Mass.	28,316	Minn.	531	Ga.	.1951
21	Ky.	1,621	Wisc.	.6689	R.I.	99	P.R.	1:26	Ill.	17,261	P.R.	61	Ia.	1:43	Ill.	28,143	Ill.	501	Tenn.	.1916
22	S.C.	1,511	Kans.	.6076	Ind.	92	Mass.	1:26	Kans.	17,133	Ind.	59	Kans.	1:44	R.I.	28,070	Ore.	487	Ida.	.1912
23	Ida.	1,457	N.J.	.5555	Minn.	86	Mont.	1:26	S.D.	17,102	Ky.	57	Nev.	1:46	La.	27,910	Ia.	445	Ark.	.1724
24	Wash.	1,454	Colo.	.5420	Ky.	80.5	Kans.	1:28	N.C.	16,980	Kans.	51.4	N.J.	1:47	N.C.	26,933	P.R.	413	La.	.1700
25	Kans.	1,378	Cal.	.5401	Kans.	80.4	Ia.	1:28	Va.	16,848	D.C.	50	Wisc.	1:48	Kans.	26,800	Okla.	399	N.C.	.1669
26	Colo.	1,373	S.C.	.5361	Ida.	76.5	Tenn.	1:28	W.Va.	16,828	Ida.	48	P.R.	1:48	N.J.	26,050	Mo.	381	N.H.	.1667
27	Minn.	1,369	Mass.	.5357	N.M.	69	Wisc.	1:29	Hawaii	16,746	Minn.	47	S.D.	1:49	Tenn.	25,875	Ark.	365	S.D.	.1664
28	N.M.	1,308	W.Va.	.5227	Wash.	67	N.J.	1:31	Okla.	16,157	Colo.	46	Tenn.	1:50	Conn.	25,854	R.I.	334	Ve.	.1635
29	Alaska	1,171	La.	.5154	Ariz.	63	W.Va.	1:32	Minn.	15,921	Utah	43	Mass.	1:53	Utah	25,669	D.C.	325	Guam	.1578
30	D.C.	1,167	Ariz.	.5152	Utah	61	Fla.	1:34	Conn.	15,224	Mo.	39	Fla.	1:53	Okla.	24,821	Kans.	315	Uteh	.1569
31	Ariz.	1,146	Tenn.	.5128	D.C.	61	S.D.	1:34	Mo.	15,219	Hawaii	37.5	La.	1:54	S.D.	24,431	Hawaii	303	Ie.	.1549
32	Utah	1,104	S.D.	.5008	Colo.	60	Ga.	1:35	Fla.	15,092	N.M.	36	Colo.	1:55	Hawaii	24,338	Ky.	303	Okle.	.1470
33	Ore.	1,043	Ky.	.4773	W.Va.	56	Ariz.	1:35	Ga.	15,005	Wash.	35	W.Ve.	1:58	N.H.	24,199	N.M.	256	Me.	.1451
34	W.Va.	942	Ore.	.4557	Mo.	55	N.C.	1:39	Me.	14,997	Ark.	35	Ky.	1:60	Fla.	23,743	W.Va.	239	Wisc.	.1407
35	Hawaii	913	Fla.	.4460	Hawaii	54.5	Ark.	1:40	Ala.	14,991	Ariz.	35	Ark.	1:60	Me.	23,706	Wyom.	208	P.R.	.1399
36	P.R.	880	Mont.	.4330	Okla.	53	N.H.	1:41	Miss.	14,832	Okla.	34.5	N.C.	1:63	Miss.	23,372	Uteh	189	Mess.	.1398
37	Okla.	856	N.C.	.4299	Ark.	53	Ky.	1:42	N.D.	14,801	Ore.	34	Ariz.	1:64	D.C.	23,337	Ind.	184	Kans.	.1389
38	Mo.	837	Ga.	.4234	Miss.	52	Colo.	1:42	Del.	14,768	Miss.	33	Ore.	1:67	Ala.	23,292	Aleska	183	Mont.	.1366
39	Miss.	771	Wash.	.4102	Ore.	52	Ore.	1:44	N.H.	14,520	Me.	31	N.H.	1:68	Ve.	22,588	N.D.	178	Minn.	.1351
40	Me.	735	N.H.	.3550	Me.	49	Miss.	1:45	Tenn.	14,317	W.Va.	31	Ga.	1:69	N.D.	22,523	Ariz.	161	W.Va.	.1327
41	Ark.	715	Minn.	.3487	Alaska	36.3	Minn.	1:46	Md.	14,225	N.D.	23	Miss.	1:71	Ohio	22,443	Cal.	158	Mich.	.1093
42	N.D.	518	Ark.	.3377	N.D.	35	Nebr.	1:48	Mass.	13,798	Del.	22.1	Nebr.	1:74	Mo.	21,463	Ida.	157	N.J.	.1063
43	Del.	474	Tex.	.3302	Del.	32.1	Okla.	1:51	Ark.	13,484	Nebr.	21	Okla.	1:79	Del.	21,451	Vt.	157	Nebr.	.0940
44	Nev.	472	Miss.	.3288	Nebr.	32	Wesh.	1:53	Ohio	13,245	Vt.	19.9	Minn.	1:84	Ark.	20,419	Nev.	154	Ky.	.0891
45	Nebr.	387	Ind.	.3260	Vt.	28.9	Ind.	1:58	Vt.	13,164	Mont.	18.88	Ind.	1:90	Md.	19,795	Me.	154	Mo.	.0799
46	Vt.	380	Okla.	.3158	Mont.	28.88	Cal.	1:58	La.	12,938	S.D.	14	Tex.	1:93	Vt.	19,118	Del.	151	Ariz.	.0726
47	Wyom.	351	P.R.	.2983	Nev.	27	Ohio	1:59	S.C.	12,262	Nev.	13	Cal.	1:93	Nebr.	18,432	Wash.	151	Ohio	.0627
48	S.D.	342	Nebr.	.2504	S.D.	20	Tex.	1:63	Nebr.	12,096	Alaska	12	Ohio	1:100	S.C.	18,157	Nebr.	145	Ill.	.0449
49	Mont.	324	Ill.	.2323	N.H.	20	Ill.	1:74	Mont.	11,215	N.H.	12	Wash.	1:101	Mont.	17,155	N.H.	136	Wesh.	.0426
50	N.H.	290	Ohio	.2253	Wyom.	14.7	Guam	1:77	Guam	10,008	Guam	10	Ill.	1:121	P.R.	14,433	S.D.	114	Ind.	.0347
51	Guam	130	Mo.	.1757	Guam	13	Mo.	1:87	P.R.	7,656	Wyom.	10	Mo.	1:122	Guam	13,011	Mont.	99	N.Y.	.0316
52																	Guam	16	Cal.	.0075

*National averages indicated by underlining.

Table 1-4

Inter-Regional Ranking of State and Territorial Public Health Laboratories by Expenditures, Positions, and Specimens

Rank	Expenditures				Laboratory Personnal												Specimens			
	Total Laboratory X1000		Expenditure Per Capita		Filled Positions						Filled Prof. & Tech. Positions						Total Lab. Specimens X1000		Specimens Per Capita	
					Filled Positions		Positions To Pop.		Expenditure Per Position		Filled Positions		Positions To Pop.		Expenditure Per Position					
	State	$	State	Ratio	State	#	State	Ratio (X1000)	State	$	State	#	State	Ratio (X1000)	State	$	State	#	State	Ratio
Total		**101,040**				**5,715.18**						**3,548.08**						**27,310**		
Average		1.981		.5425		112.06		1:33		17,679		69.57		1:52		28,477				.1339
New England		**9,880**		**.8100**		**649.35**		**1:18**		**15,215**		**374.35**		**1:33**		**26,393**		**2,272**		**.1862**
1	Conn.	3,444	R.I.	2.0591	Mass.	226.25	R.I.	1: 9	R.I.	19,281	Conn.	133.2	R.I.	1:14	Mass.	28,316	Mass.	815	R.I.	.3599
2	Mass.	3,122	Conn.	1.1127	Conn.	226.2	Conn.	1:14	Conn.	15,224	Mass.	110.25	Conn.	1:23	R.I.	28,070	Conn.	676	Vt.	.3333
3	R.I.	1,909	Vt.	.8077	R.I.	99	Vt.	1:16	Me.	14,997	R.I.	68	Vt.	1:24	Conn.	25,854	R.I.	334	Conn.	.2184
4	Ma.	735	Me.	.6939	Me.	49	Ma.	1:22	N.H.	14,520	Me.	31	Ma.	1:34	N.H.	24,199	Vt.	157	N.H.	.1667
5	Vt.	380	Mass.	.5357	Vt.	28.9	Mass.	1:25	Mass.	13,798	Vt.	19.9	Mass.	1:53	Ma.	23,706	Me.	153	Me.	.1451
6	N.H.	290	N.H.	.3550	N.H.	20	N.H.	1:40	Vt.	13,164	N.H.	12	N.H.	1:68	Vt.	19,118	N.H.	136	Mass.	.1399
Middle Atlantic																		**1,351**		
1	N.J.	4,064	N.J.	.5555	N.J.	233	N.J.	1:31	N.J.	17,441	N.J.	156	N.J.	1:47	N.J.	26,050	N.J.	778	N.J.	.1063
2	N.Y.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	N.Y.	573	N.Y.	.0316
3	Pa.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
East North Central		**19,425**		**.4740**		**1,032.75**		**1:40**		**18,809**		**607.15**		**1:67**		**31,994**		**3,058**		**.0746**
1	Mich.	9,599	Mich.	1.0483	Mich.	446.5	Mich.	1:21	Mich.	21,498	Mich.	252.9	Mich.	1:36	Mich.	37,956	Mich.	1,001	Wisc.	.1407
2	Wisc.	3,081	Wisc.	.6689	Ohio	183	Wisc.	1:29	Wisc.	19,110	Ohio	108	Wisc.	1:48	Wisc.	32,351	Ohio	724	Mich.	.1093
3	Ill.	2,589	Ind.	.3260	Wisc.	161.25	Ind.	1:58	Ind.	18,821	Wisc.	95.25	Ind.	1:90	Ind.	29,348	Wisc.	648	Ohio	.0627
4	Ohio	2,424	Ill.	.2323	Ill.	150	Ohio	1:59	Ill.	17,261	Ill.	92	Ohio	1:100	Ill.	28,143	Ill.	501	Ill.	.0449
5	Ind.	1,732	Ohio	.2253	Ind.	92	Ill.	1:74	Ohio	13,245	Ind.	59	Ill.	1:121	Ohio	22,443	Ind.	184	Ind.	.0347
West North Central		**7,083**		**.4244**		**412.4**		**1:40**		**17,175**		**262.4**		**1:64**		**26,993**		**2,108**		**.1263**
1	Ia.	2,252	N.O.	.8158	Ia.	104	N.D.	1:18	Ie.	21,655	Ia.	67	N.D.	1:28	Ia.	33,614	Minn.	531	N.D.	.2814
2	Kans.	1,378	Ia.	.7847	Minn.	86	Ia.	1:28	Kans.	17,133	Kans.	51.4	Ia.	1:43	Minn.	29,131	Ie.	445	S.D.	.1664
3	Minn.	1,369	Kans.	.6076	Kans.	80.4	Kans.	1:28.2	S.O.	17,102	Minn.	47	Kans.	1:44	Kans.	26,800	Mo.	381	Ia.	.1549
4	Mo.	837	S.D.	.5008	Mo.	55	S.D.	1:34	Minn.	15,921	Mo.	39	S.O.	1:48	S.O.	24,431	Kans.	315	Minn.	.1389
5	N.D.	518	Minn.	.3487	N.D.	35	Minn.	1:46	Mo.	15,219	N.D.	23	Nebr.	1:74	N.O.	22,523	N.D.	179	Kans.	.1269
6	Nebr.	387	Nebr.	.2504	Nabr.	32	Nabr.	1:48	N.O.	14,801	Nebr.	21	Minn.	1:84	Mo.	21,463	Nabr.	145	Nebr.	.0940
7	S.O.	342	Mo.	.1757	S.D.	20	Mo.	1:86	Nebr.	12,096	S.D.	14	Mo.	1:122	Nabr.	18,432	S.O.	114	Mo.	.0799
South Atlantic		**21,097**		**.6257**		**1,362.3**		**1:25**		**15,486**		**916.3**		**1:37**		**23,023**		**7,406**		**.2197**
1	Va.	5.105	D.C.	1.6297	Va.	303	D.C.	1:12	D.C.	19,129	Ve.	226	O.C.	1:14	W.Va.	30,400	Fla.	1,994	D.C.	.4545
2	Md.	3,741	Va.	1.0278	Md.	263	Md.	1:15	N.C.	16,980	Md.	189	Md.	1:22	Ga.	29,376	Md.	1,289	Md.	.3145
3	Fla.	3,728	Md.	.9129	Fla.	247	Va.	1:16	Va.	16,848	Fla.	157	Va.	1:22	N.C.	26,933	Ga.	961	Dal.	.2607
4	N.C.	2,343	Del.	.8188	Ga.	139	Del.	1:18	W.Va.	16,828	N.C.	87	Dal.	1:26	Fla.	23,743	N.C.	910	S.C.	.2571
5	Ga.	2,086	S.C.	.5361	N.C.	138	S.C.	1:22	Fla.	15,092	S.C.	832	S.C.	1:34	D.C.	23,337	Va.	812	Fla.	.2386
6	S.C.	1,511	W.Va.	.5227	S.C.	123.2	W.Va.	1:32	Ga.	15,005	Ga.	71	Fla.	1:53	Va.	22,588	S.C.	725	Ga.	.1951
7	O.C.	1,167	Fla.	.4460	D.C.	61	Fla.	1:34	Oal.	14,768	D.C.	50	W.Va.	1:58	Dal.	21,451	D.C.	325	N.C.	.1669
8	W.Va.	942	Ga.	.4234	W.Va.	56	Ga.	1:35	Md.	14,225	W.Va.	31	N.C.	1:63	Md.	19,795	W.Va.	239	Va.	.1635
9	Oel.	474	N.C.	.4299	Dal.	32.1	N.C.	1:39	S.C.	12,262	Del.	22.1	Ga.	1:69	S.C.	18,157	Dal.	151	W.Va.	.1327
East South Central		**7,358**		**.5433**		**470.5**		**1:29**		**15,639**		**294**		**1:46**		**25,028**		**3,252**		**.2400**
1	Ala.	2,818	Ala.	.7798	Ala.	188	Ala.	1:19	Ky.	20,137	Ala.	121	Ala.	1:30	Ky.	28,439	Ale.	1,308	Ala.	.3619
2	Tenn.	2,148	Tenn.	.5128	Tenn.	150	Tenn.	1:27	Ala.	14,991	Tann.	83	Tann.	1:50	Tann.	25,875	Miss.	839	Miss.	.3575
3	Ky.	1,621	Ky.	.4773	Ky.	80.5	Ky.	1:42	Miss.	14,832	Ky.	57	Ky.	1:60	Miss.	23,372	Tenn.	803	Tenn.	.1916
4	Miss.	771	Miss.	.3288	Miss.	52	Miss.	1:45	Tenn.	14,317	Miss.	33	Miss.	1:71	Ala.	23,292	Ky.	303	Ky.	.0891
West South Central		**7,566**		**.3628**		**452**		**1:46**		**16,739**		**271.5**		**1:77**		**27,867**		**4,383**		**.2101**
1	Tex.	4,041	La.	.5154	Tex.	195	La.	1:25	Tex.	20,724	Tax.	132	La.	1:54	Tex.	30,615	Tex.	2,978	Tex.	.2431
2	La.	1,954	Ark.	.3377	La.	151	Ark.	1:40	Okla.	16,157	La.	70	Ark.	1:60	La.	27,910	La.	644	Ark.	.1724
3	Okla.	856	Tex.	.3302	Okla.	53	Okla.	1:51	Ark.	13,484	Ark.	35	Okle.	1:79	Okla.	24,821	Okle.	399	La.	.1700
4	Ark.	715	Okla.	.3158	Ark.	53	Tax.	1:63	La.	12,938	Okla.	34.5	Tax.	1:93	Ark.	20,419	Ark.	365	Okla.	.1470
Mountain		**7,535**		**.7813**		**400.08**		**1:24**		**18,834**		**249.88**		**1:39**		**30,155**		**1,766**		**.1831**
1	Ida.	1,457	Ida.	1.7770	Ida.	76.5	Ida.	1:11	Wyom.	23,902	Ida.	48	Ida.	1:17	Nev.	36,295	Colo.	540	Wyom.	.5561
2	Colo.	1,373	N.M.	1.1404	N.M.	69	N.M.	1:17	Colo.	20,890	Colo.	46	Utah	1:28	N.M.	36,333	N.M.	256	Nav.	.2603
3	N.M.	1,308	Wyom.	.9395	Ariz.	63	Utah	1:20	Ida.	19,047	Utah	43	N.M.	1:31	Wyom.	35,136	Wyom.	208	N.M.	.2234
4	Ariz.	1,146	Utah	.9152	Utah	61	Nev.	1:22	N.M.	18,957	N.M.	36	Wyom.	1:37	Ariz.	32,739	Utah	189	Colo.	.2131
5	Utah	1,104	Nav.	.7970	Colo.	60	Wyom.	1:25	Ariz.	18,188	Ariz.	35	Mont.	1:40	Ida.	30,356	Ariz.	161	Ida.	.1912
6	Nev.	472	Colo.	.5420	Mont.	28.88	Mont.	1:26	Utah	18,094	Mont.	18.88	Nev.	1:46	Colo.	29,857	Ida.	157	Utah	.1569
7	Wyom.	351	Ariz.	.5152	Nev.	27	Ariz.	1:35	Nev.	17,476	Nev.	13	Colo.	1:55	Utah	25,669	Nav.	154	Mont.	.1330
8	Mont.	324	Mont.	.4330	Wyom.	14.7	Colo.	1:42	Mont.	11,215	Wyom.	10	Ariz.	1:63	Mont.	17,155	Mont.	99	Ariz.	.0726
Pacific		**16,021**		**.5675**		**574.8**		**1:49**		**27,873**		**345.5**		**1:82**		**46,372**		**1,282**		**.0454**
1	Cal.	11,441	Alaska	3.3272	Cal.	365	Alaska	1: 9	Alaska	32,264	Cal.	227	Hawaii	1:23	Alaska	97,598	Ore.	487	Alaska	.5203
2	Wash.	1,454	Hawaii	1.0551	Wash.	67	Hawaii	1:15	Cal.	31,346	Hawaii	37.5	Alaska	1:29	Cal.	50,402	Hawaii	303	Hawaii	.3509
3	Alaska	1,171	Cal.	.5401	Hawaii	54.5	Ore.	1:44	Wash.	21,697	Wash.	35	Ore.	1:67	Wash.	41,534	Aleska	183	Ora.	.2127
4	Ora.	1,043	Ore.	.4557	Ore.	52	Wesh.	1:53	Ore.	20,050	Ore.	34	Cal.	1:93	Ora.	30,665	Cal.	158	Wash.	.0426
5	Hawaii	913	Wash.	.4102	Alaska	36.3	Cal.	1:58	Hawaii	16,746	Alaska	12	Wash.	1:101	Hawaii	24,338	Wash.	151	Cal.	.0075
Territories		**1,011**		**.3312**		**128**		**1:24**		**7,895**		**71**		**1:43**		**14,233**		**428**		**.1405**
1	P.R.	880	Guam	1.3011	P.R.	115	P.R.	1:26	Guam	10,008	P.R.	61	Guam	1:10	P.R.	14,433	P.R.	413	Guam	.1578
2	Guam	130	P.R.	.2983	Guam	13	Guam	1:77	P.R.	7,656	Guam	10	P.R.	1:48	Guam	13,011	Guam	16	P.R.	.1399
3	V.I.																			

Table 1-5
Summary of Laboratory Specimens by Category and Percent of Category to Total Specimens

Lab & Region	Total No. of Specimens	Diagnostic Bacteriology		Mycology		Parasitology		Virology		Immunology		Hematology		Clinical Chemistry		Pathology		Environmental Microbiology		Environmental Chemistry		Occupational Health/Safety		Toxicology	
		Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
No. States Reporting	52	52		49		52		51		52		39		44		14		50		44		20		36	
Total	**27,310,164**	**7,856,446**		**54,579**		**352,963**		**244,787**		**9,243,229**		**1,539,844**		**3,255,776**		**537,541**		**2,524,798**		**733,365**		**44,970**		**1,121,866**	
Average	525,195	147,239	28.0	1,114	<1	6,788	1.3	4,800	<1	177,754	33.8	39,483	5.6	73,995	11.9	38,396	2.0	50,496	9.2	16,667	2.7	2,249	<1	31,163	4.1
New England	**2,271,778**	**745,275**	**32.6**	**2,830**	**<1**	**16,289**	**<1**	**17,915**	**<1**	**571,030**	**25.1**	**15,219**	**<1**	**413,765**	**18.2**	**466**	**<1**	**95,503**	**4.2**	**101,498**	**4.5**	**1,926**	**<1**	**290,062**	**12.8**
Conn.	675,884	263,436	39.0	1,886	<1	12,624	1.9	11,660	1.7	122,311	18.0	13,302	2.0	115,714	17.1	466	<1	26,579	3.9	25,714	3.8	1,615	<1	80,577	11.9
Mass.	815,243	168,572	20.7	425	<1	19	<1	4,398	<1	223,543	27.4	–	–	246,218	30.2	–	–	75	<1	–	–	–	–	171,993	21.1
Me.	153,651	47,242	30.1	240	<1	56	<1	902	<1	41,370	26.9	408	<1	15,944	10.4	–	–	22,381	14.6	11,855	7.7	12	<1	13,241	8.6
N.H.	136,326	73,656	54.0	60	<1	791	<1	286	<1	39,633	29.0	–	–	21,900	16.6	–	–	–	–	–	–	–	–	–	–
R.I.	333,669	135,862	40.7	36	<1	1,677	<1	112	<1	97,808	29.3	1,509	<1	13,989	4.2	–	–	21,533	6.4	39,909	12.0	299	<1	20,935	6.2
Vt.	157,005	56,507	36.0	183	<1	1,122	<1	557	<1	46,365	29.5	–	–	–	–	–	–	24,935	15.9	24,020	15.3	–	–	3,316	2.1
Middle Atlantic	**1,350,865**	**389,710**	**28.8**	**4,286**	**<1**	**4,157**	**<1**	**78,356**	**5.8**	**454,363**	**33.6**	**5,139**	**<1**	**79,108**	**5.9**	**14,523**	**1.1**	**66,714**	**4.9**	**52,657**	**4.0**	**225**	**<1**	**201,627**	**14.9**
N.J.	777,591	220,680	28.3	917	<1	3,310	<1	63,373	8.1	250,694	32.2	2,855	<1	51	<1	9	<1	18,606	2.3	15,244	2.0	225	<1	201,627	25.9
N.Y.	573,274	169,030	29.5	3,369	<1	847	<1	14,983	2.6	203,669	35.5	2,284	<1	79,057	13.8	14,514	2.5	48,108	8.4	37,413	6.5	–	–	–	–
Pa.																									
East North Central	**3,058,305**	**1,000,533**	**32.5**	**9,217**	**<1**	**15,116**	**<1**	**32,088**	**1.0**	**858,479**	**27.8**	**59,828**	**1.9**	**384,612**	**12.5**	**145,645**	**4.7**	**348,208**	**11.3**	**119,856**	**3.8**	**9,955**	**<1**	**74,768**	**2.4**
Ill.	500,905	237,113	47.3	1,176	<1	1,221	<1	6,295	1.3	138,088	27.6	2,487	<1	–	–	–	–	65,008	13.0	29,881	6.0	–	–	19,636	3.9
Ind.	184,286	14,180	7.7	1,341	<1	3,145	1.7	3,203	1.7	80,403	43.6	–	–	–	–	–	–	53,773	29.2	24,622	13.4	–	–	3,619	1.9
Mich.	1,001,162	359,960	35.9	2,310	<1	3,438	<1	3,241	<1	350,299	35.0	24,741	2.5	132,871	13.3	–	–	90,740	9.1	18,530	1.9	–	–	15,032	1.5
Ohio	723,802	316,397	42.7	1,227	<1	1,712	<1	13,097	1.8	105,880	14.3	4,003	<1	171,979	23.2	–	–	71,736	9.6	15,616	2.1	4,262	<1	17,893	2.4
Wisc.	648,150	72,883	11.2	3,163	<1	5,600	<1	6,252	<1	183,809	28.4	28,597	4.4	79,762	12.3	145,645	22.5	66,951	10.3	31,207	4.8	5,693	<1	18,588	2.9
West North Central	**2,108,334**	**537,189**	**25.7**	**6,142**	**<1**	**23,043**	**1.1**	**15,971**	**<1**	**989,895**	**47.4**	**26,713**	**1.3**	**181,738**	**8.7**	**175**	**<1**	**218,504**	**10.4**	**76,611**	**3.7**	**2,338**	**<1**	**30,015**	**1.8**
Ia.	444,672	109,648	24.3	864	<1	1,544	<1	2,821	<1	253,193	56.1	–	–	4,212	<1	–	–	39,883	8.8	25,007	5.5	1,652	<1	5,848	3.0
Kans.	314,806	81,557	28.4	623	<1	6,455	2.2	2,426	<1	136,505	47.5	–	–	20,975	7.3	–	–	45,523	15.8	16,782	5.8	686	<1	3,274	1.3
Minn.	530,582	143,861	27.1	3,620	<1	11,875	2.2	6,663	1.2	289,354	54.5	–	–	75,034	14.1	175	<1	–	–	–	–	–	–	–	–
Mo.	380,640	80,870	21.2	414	<1	1,324	<1	2,904	<1	144,988	38.1	7,702	2.0	62,619	16.5	–	–	70,640	18.6	8,811	2.3	–	–	368	<1
Nebr.	145,297	28,419	19.6	16	<1	345	<1	644	<1	60,562	41.7	–	–	2,758	1.9	–	–	21,824	15.0	10,259	7.1	–	–	20,470	14.1
N.D.	178,712	52,658	29.5	512	<1	1,020	<1	439	<1	59,662	33.4	18,585	10.4	16,140	9.0	–	–	21,177	11.8	8,464	4.8	–	–	55	<1
S.D.	113,625	40,176	35.4	93	<1	480	<1	74	<1	45,631	40.2	426	<1	–	–	–	–	19,457	17.1	7,288	6.4	–	–	–	–
South Atlantic	**7,406,294**	**1,900,059**	**25.5**	**10,555**	**<1**	**141,626**	**1.9**	**33,741**	**<1**	**2,470,798**	**33.1**	**497,031**	**6.6**	**993,532**	**13.3**	**359,465**	**4.8**	**467,766**	**6.2**	**134,370**	**2.5**	**10,963**	**<1**	**386,388**	**5.2**
Del.	150,962	31,362	20.8	19	<1	243	<1	3,566	2.3	32,663	21.6	4,420	2.9	16,433	10.9	46,775	31.0	10,299	6.8	3,219	2.1	–	–	1,963	1.3
D.C.	325,441	84,976	26.1	–	–	146	<1	55	<1	132,326	40.1	25,893	8.0	27,412	8.4	20,615	6.3	1,783	<1	665	<1	–	–	31,570	9.7
Fla.	1,993,701	622,169	31.2	3,080	<1	66,508	3.3	5,569	<1	631,491	31.7	153,909	7.7	260,293	13.1	–	–	221,285	11.1	5,188	<1	994	<1	23,215	1.2
Ga.	961,151	272,180	28.3	401	<1	21,457	2.2	3,829	4.0	481,729	50.1	50,493	5.3	81,270	8.5	–	–	101	<1	–	–	–	–	49,691	5.2
Md.	1,288,987	418,308	32.4	2,506	<1	8,727	<1	6,334	<1	353,515	27.4	95,733	7.4	187,162	14.5	76,361	5.9	85,263	6.6	47,432	3.7	5,828	<1	1,818	<1
N.C.	909,796	21,252	2.2	1,527	<1	5,354	<1	5,917	<1	365,546	38.1	53,083	5.5	212,065	22.1	174,768	18.2	48,766	5.1	16,272	1.7	3,841	<1	1,405	<1
S.C.	724,756	224,177	25.4	1,697	<1	22,310	2.5	6,343	<1	254,452	28.6	79,154	9.0	101,780	11.5	3,030	<1	12,569	1.4	13,096	1.5	–	–	6,148	<1
Va.	812,260	141,919	17.5	918	<1	14,724	1.8	1,370	<1	172,877	21.3	33,631	4.1	67,566	8.3	–	–	59,879	7.4	48,498	6.0	300	<1	270,578	33.3
W.Va.	239,240	83,716	35.0	407	<1	2,157	<1	758	<1	46,199	19.3	715	<1	39,551	16.5	37,916	15.8	27,821	11.6	–	–	–	–	–	–
East South Central	**3,251,753**	**1,021,604**	**31.4**	**6,916**	**<1**	**73,908**	**2.3**	**11,160**	**<1**	**1,201,879**	**37.0**	**249,410**	**7.7**	**291,441**	**7.7**	**11,909**	**<1**	**305,991**	**9.4**	**66,640**	**2.1**	**2,070**	**<1**	**8,825**	**<1**
Ala.	1,307,764	394,669	30.2	3,371	<1	51,202	3.9	3,562	<1	506,590	38.7	67,872	5.2	95,922	7.3	11,909	<1	111,756	8.5	54,896	4.2	–	–	6,015	<1
Ky.	302,579	26,613	8.8	263	<1	3,440	1.1	1,916	<1	152,395	50.4	18,955	6.3	46,237	15.3	–	–	37,756	12.5	10,124	3.4	2,070	<1	2,810	<1
Miss.	838,805	231,864	27.6	1,990	<1	11,933	1.4	3,066	<1	271,249	32.3	160,885	19.2	93,235	11.1	–	–	62,963	7.5	1,620	<1	–	–	–	–
Tenn.	802,605	368,458	45.9	1,292	<1	7,333	<1	2,616	<1	271,645	33.8	1,698	<1	56,047	7.0	–	–	93,516	11.7	–	–	–	–	–	–
West South Central	**4,386,268**	**1,000,519**	**22.8**	**8,077**	**<1**	**49,155**	**1.1**	**31,170**	**<1**	**1,439,108**	**32.8**	**516,044**	**11.7**	**556,321**	**12.7**	**4,065**	**<1**	**701,513**	**16.0**	**36,036**	**<1**	**290**	**<1**	**43,970**	**1.0**
Ark.	364,750	109,287	30.0	1,586	<1	1,964	<1	1,850	<1	121,864	31.6	40,958	11.2	27,777	7.6	–	–	56,771	15.6	2,693	<1	–	–	–	–
La.	644,379	139,616	21.7	1,734	<1	31,055	4.8	2,181	<1	245,270	38.1	–	–	37,153	5.8	4,065	<1	173,814	27.0	9,491	1.5	–	–	–	–
Okla.	398,641	118,147	29.6	452	<1	3,423	<1	4,832	1.2	143,024	35.9	8,474	2.1	46,557	11.7	–	–	68,204	17.1	5,528	1.4	–	–	–	–
Tex.	2,978,498	633,469	21.3	4,305	<1	12,713	<1	22,307	<1	928,950	31.2	466,612	15.7	444,834	15.0	–	–	402,724	13.5	18,324	<1	290	<1	43,970	1.2
Mountain	**1,765,720**	**662,890**	**37.5**	**3,766**	**<1**	**7,707**	**<1**	**9,226**	**<1**	**606,272**	**34.3**	**33,781**	**1.9**	**61,565**	**3.5**	**1,293**	**<1**	**210,923**	**11.9**	**84,802**	**4.8**	**8,035**	**<1**	**75,460**	**4.3**
Ariz.	161,436	23,988	14.6	1,442	<1	249	<1	4,399	2.7	71,302	44.2	6,025	3.7	–	–	–	–	46,994	29.1	5,980	3.7	1,057	<1	–	–
Colo.	539,904	179,460	33.2	225	<1	2,157	<1	621	<1	219,230	40.6	18,192	3.4	14,985	2.7	–	–	25,196	4.7	31,711	5.9	4,436	<1	43,691	8.1
Ida.	157,277	58,310	37.1	986	<1	438	<1	287	<1	24,771	15.7	4,479	2.8	7,614	4.8	1,293	<1	34,624	22.0	11,611	7.4	–	–	12,864	8.2
Mont.	99,495	18,749	18.3	181	<1	461	<1	341	<1	56,210	55.0	–	–	–	–	–	–	14,847	14.5	5,850	5.7	120	<1	2,736	2.8
Nev.	154,120	56,536	36.7	60	<1	159	<1	–	–	43,804	28.4	2,442	1.6	18,312	11.9	–	–	25,000	16.2	7,807	5.1	–	–	–	–
N.M.	256,295	87,489	34.3	677	<1	964	<1	1,264	<1	94,211	36.9	2,643	1.0	20,623	7.9	–	–	26,276	10.3	12,306	4.8	30	<1	9,812	3.8
Utah	189,209	64,485	33.6	195	<1	3,151	1.6	1,840	<1	75,134	39.2	–	–	31	–	–	–	28,627	14.9	9,537	5.0	2,392	1.2	3,817	3.2
Wyo.	207,984	173,873	83.6	–	–	128	<1	474	<1	21,610	10.4	–	–	–	–	–	–	9,359	4.5	–	–	–	–	2,540	1.2
Pacific	**1,282,368**	**362,983**	**28.3**	**2,584**	**<1**	**12,131**	**<1**	**14,832**	**1.2**	**515,557**	**40.2**	**7,973**	**<1**	**204,545**	**16.0**	**–**	**–**	**88,623**	**6.9**	**53,221**	**4.2**	**9,168**	**<1**	**10,751**	**<1**
Alaska	183,020	83,806	45.8	198	<1	1,525	<1	1,947	1.1	76,599	41.8	4,981	2.7	–	–	–	–	12,496	6.8	1,308	<1	–	–	160	–
Cal.	157,983	35,244	22.3	549	<1	2,014	1.3	6,724	4.3	58,838	37.2	92	<1	696	<1	–	–	15,259	9.7	18,813	11.5	9,168	5.8	10,586	6.7
Hawaii	303,498	196,599	64.8	875	<1	4,229	1.4	2,394	<1	48,907	16.1	3	<1	11,343	3.7	–	–	9,696	3.2	29,447	9.7	–	–	5	<1
Ore.	486,735	14,930	3.1	449	<1	1,009	<1	2,715	<1	270,268	55.5	–	–	156,310	32.1	–	–	41,054	8.4	–	–	–	–	–	–
Wash.	151,132	32,404	21.5	513	<1	3,354	2.2	1,052	<1	60,945	44.4	2,897	1.9	36,196	24.0	–	–	10,118	6.7	3,653	2.4	–	–	–	–
Territories	**428,479**	**35,684**	**8.3**	**206**	**<1**	**9,831**	**2.3**	**328**	**<1**	**135,848**	**31.7**	**128,706**	**30.0**	**89,149**	**20.8**	**–**	**–**	**21,053**	**4.9**	**7,674**	**1.8**	**–**	**–**	**–**	**–**
Guam	15,777	3,787	24.0	–	–	1,112	7.0	42	<1	1,664	10.5	4,915	31.2	3,830	24.3	–	–	419	2.6	8	<1	–	–	–	–
P.R.	412,702	31,897	7.7	206	<1	8,719	2.1	286	<1	134,184	32.5	123,791	30.0	85,319	30.0	–	–	20,634	5.0	7,666	1.9	–	–	–	–
V.I.																									

SECTION II
PERSONNEL

Table 2-1
Budgeted Positions by Categories and Position Vacancies

Lab & Region	Total Budgeted Positions	Management			Clerical			Prof. & Tech.			Support Ser.			Maintenance			Total Filled Positions	
		#	%	# Vac	#	%	# Vac	#	%	# Vac	#	%	# Vac	#	%	# Vac	#	%
Total	**5,715.2**	**370.9**		**12**	**708.7**		**44**	**3,548.1**		**154.5**	**882**		**38**	**141.9**		**9**	**5,456.6**	
Average	112.1	7.3	6.5	.23	13.9	12.4	.86	69.6	62.1	3.0	17.3	15.4	.75	2.8	2.5	.18	107.0	95.5
New England	**649.4**	**55**	**8.5**	**3**	**97.2**	**15.0**	**10**	**374.4**	**57.6**	**20**	**89.8**	**13.8**	**5**	**33**	**5.1**	**1**	**610.4**	**94.0**
Conn.	226.2	23	10.2	2	33.2	14.7	1	133.2	58.9	7	35.8	3.0	2	1	<1	–	214.2	94.7
Mass.	226.3	22	10.2	1	40	17.7	6	110.3	48.7	7	23	10.2	3	31	13.7	1	208.3	92.0
Me.	49.0	4	8.2	–	7	14.3	1	31	63.3	3	7	14.3	–	–	–	–	45.0	91.8
N.H.	20.0	1	5.0	–	4	20.0	–	12	60.0	1	3	15.0	–	–	–	–	19.0	96.0
R.I.	99.0	4	4.0	–	9	9.1	1	68	68.7	2	17	17.2	–	1	1.0	–	96.0	97.0
Vt.	28.9	1	3.5	–	4	13.8	1	19.9	68.9	–	4	13.8	–	–	–	–	27.9	96.6
Middle Atlantic	**233.0**	**9**	**3.9**	**1**	**24**	**10.3**	**5**	**156**	**66.9**	**12**	**42**	**18.0**	**5**	**2**	**<1**	**–**	**210**	**90.1**
N.J.	233.0	9	3.9	1	24	10.3	5	156	66.9	12	42	18.0	5	2	<1	–	210	90.1
N.Y.																		
Pa.																		
East North Central	**1,032.75**	**57.4**	**5.6**	**2**	**113**	**10.9**	**3**	**607.1**	**58.8**	**32.5**	**186.8**	**18.1**	**8**	**68.4**	**6.6**	**2**	**985.3**	**95.4**
Ill.	150.0	10	6.7	1	21	14.0	–	92	61.3	7	26	17.3	4	1	<1	–	138.0	91.3
Ind.	92.0	7	7.6	–	13	14.1	1	59	64.1	2	13	2.2	–	–	–	–	89.0	96.7
Mich.	446.5	16.9	3.8	–	28	6.3	–	252.8	56.6	18	91.3	4.0	2	57.4	12.8	2	424.6	95.1
Ohio	183.0	7	3.8	–	26	14.2	1	108	59.0	–	32	17.4	1	10	6.5	–	181.0	98.9
Wisc.	161.26	16.5	10.2	1	25	16.5	1	95.3	59.1	5.5	24.5	16.2	1	–	–	–	162.8	94.7
West North Central	**412.4**	**36**	**8.7**	**1**	**56**	**13.6**	**2**	**262.4**	**63.6**	**8**	**56.5**	**13.7**	**1**	**1.5**	**<1**	**–**	**400.4**	**97.1**
Ia.	104.0	10	9.6	–	14	13.6	1	67	64.4	4	13	12.5	1	–	–	–	98.0	94.2
Kans.	80.4	9	11.2	–	10	12.4	–	61.4	63.9	3	10	12.4	–	–	–	–	77.4	96.3
Minn.	86.0	6	7.0	1	16	18.6	–	47	64.7	–	17	19.8	–	–	–	–	86.0	98.8
Mo.	55.0	3	6.5	–	6	9.1	–	39	70.9	–	7	12.7	–	1	1.8	–	66.0	100.0
Nebr.	32.0	3	9.4	–	6	15.6	1	21	66.6	1	3	9.4	–	–	–	–	30.0	93.8
N.D.	36.0	4	11.4	–	4	11.4	–	23	66.7	–	4	11.4	–	–	–	–	35.0	100.0
S.D.	20.0	1	5.0	–	2	10.0	–	14	70.0	–	2.5	12.5	–	.5	2.6	–	20.0	100.0
South Atlantic	**1,362.3**	**67**	**4.9**	**2**	**177**	**13.0**	**9**	**916.3**	**67.3**	**26**	**183**	**13.4**	**3**	**19**	**1.4**	**2**	**1,320.3**	**96.9**
Del.	32.1	1	3.1	–	4	12.6	–	22.1	68.8	–	6	15.6	–	–	–	–	32.1	100.0
D.C.	61.0	2	3.3	–	6	9.8	–	60	82.0	2	3	4.9	–	–	–	–	69.0	96.7
Fla.	247.0	12	4.3	–	35	12.5	2	157	56.3	2	41	14.7	–	2	<1	–	243.0	87.1
Ga.	139.0	9	6.5	1	21	15.1	1	71	61.1	1	37	26.6	1	1	<1	–	135.0	97.1
Md.	263.0	4	1.5	–	36	13.3	–	189	71.9	4	30	11.4	–	5	1.9	–	269.0	98.6
N.C.	138.0	9	6.6	–	17	12.3	–	87	63.0	2	23	16.7	–	2	1.4	–	136.0	98.5
S.C.	123.2	13	10.6	1	13	10.6	2	83.2	67.6	4	13	10.6	1	1	<1	–	115.2	93.7
Va.	303.0	15	4.9	–	38	12.6	3	226	74.6	9	20	6.6	–	4	1.3	–	291.0	96.0
W.Va.	66.0	2	3.6	–	8	14.2	1	31	55.4	2	11	19.6	1	4	7.1	2	60.0	89.3
East South Central	**470.5**	**32**	**6.8**	**–**	**66**	**14.0**	**2**	**294**	**62.5**	**11**	**74.5**	**15.8**	**–**	**4**	**<1**	**1**	**456.5**	**97.0**
Ala.	188.0	16	8.0	–	30	16.0	–	121	64.4	1	21	11.2	–	1	<1	–	187.0	99.5
Ky.	80.5	6	7.6	–	4	6.0	–	67	70.8	2	12.5	15.5	–	1	1.2	–	78.5	97.5
Miss.	62.0	2	3.9	–	8	15.4	–	33	63.5	5	9	17.3	–	–	–	–	47.0	90.4
Tenn.	160.0	9	6.0	–	24	16.0	2	83	55.3	3	32	21.3	–	2	1.3	1	144.0	96.0
West South Central	**452.0**	**17**	**3.8**	**–**	**76**	**16.8**	**6**	**271.5**	**60.1**	**9**	**86.5**	**19.2**	**2**	**1**	**<1**	**–**	**435.0**	**96.2**
Ark.	63.0	2	3.8	–	8	15.1	4	35	66.0	1	7	13.2	1	1	1.9	–	47.0	88.7
La.	151.0	10	6.6	–	36	23.8	–	70	46.4	–	35	23.2	–	–	–	–	151.0	100.0
Okla.	53.0	2	3.8	–	5	9.4	–	34.5	65.1	–	11.5	21.7	–	–	–	–	53.0	100.0
Tex.	195.0	3	1.6	–	27	13.8	2	132	67.7	8	33	16.9	1	–	–	–	184.0	94.4
Mountain	**399.1**	**34.5**	**8.6**	**1**	**52**	**13.0**	**3**	**251.9**	**63.1**	**8**	**54.7**	**13.7**	**9**	**6**	**1.5**	**1**	**378.0**	**94.7**
Ariz.	63.0	6	9.5	–	11	17.5	1	35	55.5	1	10	15.9	4	1	1.6	–	57.0	90.5
Colo.	60.0	3	5	–	5	8.3	1	46	76.7	2	6	10.0	3	–	–	–	54.0	90.0
Ida.	76.6	7.6	9.8	–	12	15.7	1	48	62.7	1	5	6.5	–	4	5.2	–	74.5	97.4
Mont.	27.9	3	10.8	1	4	14.3	–	20.9	74.9	2	–	–	–	–	–	–	24.9	89.2
Nev.	27.0	3	11.1	–	3	11.1	–	13	48.1	–	8	29.6	–	–	–	–	27.0	100.0
N.M.	69.0	8	11.6	–	7	10.1	–	36	52.1	2	17	24.6	1	1	1.4	1	65.0	94.2
Utah	61.0	3	4.9	–	8	13.1	–	43	70.6	–	7	11.5	1	–	–	–	60.0	98.4
Wyo.	14.7	1	6.8	–	2	13.6	–	10	68.0	–	1.7	11.6	–	–	–	–	14.7	100.0
Pacific	**574.8**	**47**	**8.2**	**–**	**90.5**	**15.7**	**2**	**346**	**60.2**	**6**	**90.3**	**15.7**	**4**	**1**	**<1**	**–**	**561.8**	**97.7**
Alaska	36.3	5	13.8	–	9	24.8	1	12	33.1	–	10.3	28.4	–	–	–	–	35.3	97.3
Cal.	365.0	28	7.7	–	55.5	16.2	2	227.5	62.3	5	54	14.8	2	–	–	–	356.0	97.5
Hawaii	54.5	1	1.8	–	4	7.3	–	37.5	68.8	1	12	22.0	2	–	–	–	51.5	94.4
Ore.	62.0	5	9.6	–	9	17.3	–	34	65.4	–	4	7.7	–	–	–	–	52.0	100.0
Wash.	67.0	8	11.9	–	13	19.4	–	35	52.2	–	10	14.9	–	1	1.5	–	67.0	100.0
Territories	**128.0**	**16**	**12.5**	**2**	**17**	**13.3**	**2**	**71**	**55.5**	**22**	**18**	**14.1**	**1**	**6**	**4.7**	**2**	**99**	**77.3**
Guam	13.0	1	7.7	–	1	7.7	–	10	76.9	1	1	7.7	1	–	–	–	11.0	84.6
P.R.	115.0	15	13.0	2	16	13.9	2	61	53.0	21	17	14.8	–	6	5.2	2	88.0	76.5
V.I.																		

DEFINITIONS

1. **Management:** Include laboratory directors and assistant directors, lab supervisors, business managers, management officers and administrative officers who spend more than 50% of their time on administration and management of laboratory activities.
2. **Clerical:** Include secretaries, typists, and clerks in the office of the director, office services staff, budget and fiscal clerks and others. Do not include those covered in supportive services categories.
3. **Professional and Technical:** Those primarily engaged in examining and testing specimens and samples, or in a laboratory improvement program; including bacteriologists, chemists, microbiologists, medical technicians and technologists, and those laboratory assistants and laboratory helpers who contribute directly to the performance of laboratory tests or work in leboratory improvement programs.
4. **Supportive Services:** All those except maintenance personnel not included in the first three categories. Examples are those engaged in preparation of glassware, media, shipping containers, enimel handling work, messengers, and supply and procurement personnel.
5. **Maintenance:** Include those who install, repair, or perform preventive maintenance on equipment and maintenance of buildings including housekeeping.

Table 2-2
Turnover

Lab & Region	Total Filled Pos.	Total # Resig & Sep.	% Turnover Filled Pos.	Number of Resignations & Separations by Categories						
				Management	Clerical	Prof & Tech Positions			Supportive Services	Maintenance
						# Pos.	Resig & Sep.	% Turnover		
Total	**5,715.2**	**778.9**		**26**	**157**	**3,548.1**	**366.4**		**145.5**	**22**
Average	112.1	15.3	13.6	.5	3.1	69.6	7.2	10.3	2.8	.43
New England	**649.4**	**76**	**11.7**	**2**	**14**	**374.4**	**25**	**6.7**	**4**	**—**
Conn.	226.2	58	25.6	2	8	133.2	16	12.0	2	—
Mass.	226.3	N/A	—	—	—	110.4	—	—	—	—
Me.	49.0	8	16.3	—	3	31	4	12.9	1	—
N.H.	20.0	2	10.0	—	—	12	1	8.3	1	—
R.I.	99.0	5	5.1	—	1	68	4	5.9	—	—
Vt.	28.9	3	10.3	—	2	19.9	—	—	—	—
Middle Atlantic	**233.0**	**26**	**11.2**	**1**	**5**	**156**	**15**	**9.6**	**5**	**—**
N.J.	233.0	26	11.2	1	5	156	15	9.6	5	—
N.Y.										
Pa.										
East North Central	**1,032.8**	**113**	**10.9**	**2**	**15**	**607.1**	**67**	**11.0**	**17**	**12**
Ill.	150.0	19	12.7	1	5	92	9	9.8	4	—
Ind.	92.0	9	9.8	—	2	59	5	8.5	2	—
Mich.	446.5	53	11.9	—	3	252.8	32	12.7	6	12
Ohio	183.0	14	7.6	—	3	108	7	6.5	4	—
Wisc.	161.3	18	11.2	1	2	95.3	14	14.7	1	—
West North Central	**412.4**	**66.9**	**16.2**	**5**	**16**	**262.4**	**33.4**	**12.7**	**11.5**	**1**
Ia.	104	18	17.3	2	2	67	9	13.4	4	1
Kans.	80.4	11.4	14.2	1	4	51.4	6.4	12.4	—	—
Minn.	86.0	15	17.4	1	5	47	5	10.6	4	—
Mo.	55.0	7	12.7	—	1	39	4	10.2	2	—
Nebr.	32.0	6	18.8	—	1	21	4	19.0	1	—
N.D.	35.0	6	17.1	—	1	23	5	21.7	—	—
S.D.	20.0	3.5	17.5	1	2	14	—	—	.5	—
South Atlantic	**1,362.3**	**198**	**14.5**	**7**	**44**	**916.3**	**121**	**13.2**	**22**	**4**
Del.	32.1	4	12.5	—	—	22.1	4	18.1	—	—
D.C.	61.0	3	4.9	—	—	50	3	6.0	—	—
Fla.	247.0	43	17.4	1	9	157	29	18.5	4	—
Ga.	139.0	21	15.1	2	7	71	8	11.3	4	—
Md.	263.0	39	14.8	2	14	189	18	9.5	5	—
N.C.	138.0	21	15.2	—	2	87	17	19.5	2	—
S.C.	123.2	17	13.8	1	3	83.2	10	12.0	3	—
Va.	303.0	44	14.5	1	8	226.0	30	13.3	3	2
W.Va.	56.0	6	10.7	—	1	31	2	6.5	1	2
East South Central	**470.5**	**37**	**7.9**	**1**	**9**	**294**	**30**	**10.2**	**3**	**—**
Ala.	188.0	7	3.7	1	3	121	3	2.5	—	—
Ky.	80.5	10	12.4	—	2	57	6	10.5	2	—
Miss.	52.0	10	19.2	—	—	33	10	30.3	—	—
Tenn.	150	10	6.7	—	4	83	5	6.0	1	—
West South Central	**452.0**	**58**	**12.8**	**—**	**24**	**271.5**	**22**	**8.1**	**10**	**—**
Ark.	53.0	20	37.7	—	10	35	5	14.3	5	—
La.	151.0	—	—	—	—	70	—	—	—	—
Okla.	53.0	5	9.4	—	—	34.5	3	8.7	—	—
Tex.	195.0	33	16.9	—	14	132	14	10.6	5	—
Mountain	**399.1**	**57**	**14.3**	**3**	**9**	**251.9**	**29**	**11.5**	**15**	**2**
Ariz.	63.0	12	19.0	1	4	35	4	11.4	3	0
Colo.	60.0	—	—	—	—	46	—	—	—	—
Ida.	76.5	6	6.9	—	3	48	3	6.2	—	1
Mont.	27.9	5	17.9	1	—	20.9	4	19.2	—	—
Nev.	27.0	—	—	—	—	13	—	—	—	—
N.M.	69.0	16	23.2	—	—	36	11	30.6	4	1
Utah	61.0	17	27.9	1	2	43	6	13.9	8	—
Wyo.	14.7	1	6.8	—	—	10	1	10.0	—	—
Pacific	**574.8**	**54**	**9.4**	**2**	**19**	**346**	**15**	**4.3**	**20**	**1**
Alaska	36.3	12	33.1	1	3	12	2	16.7	6	1
Cal.	365.0	27	7.4	—	12	227.5	7	3.1	8	—
Hawaii	54.5	6	11.0	—	1	37.5	2	5.3	3	—
Ore.	52.0	7	13.5	1	3	34	1	2.9	2	—
Wash.	67.0	2	3.0	—	—	35	1	2.9	1	—
Territories	**128.0**	**17**	**13.3**	**3**	**2**	**71**	**9**	**12.6**	**1**	**2**
Guam	13.0	1	7.7	—	—	10	—	—	1	—
P.R.	115.0	16	13.9	3	2	61	9	14.8	—	2
V.I.										

Table 2-3
Staffing Pattern of Professional and Technical Personnel in the 15 Workload Reporting Categories and Position Changes Since Last Reporting Period (+ or −)

Lab. & Region	Workload Reporting Categories																Total Prof. and Tech. Pos. Reported in Workload Categories	Total Changes Reported
	I Diagnostic Bact.	II Mycology	III Parasitology	IV Virology	V Immunology	VI Hematology	VII Clinical Chemistry	VIII Pathology	IX Env. Micro.	X Env. Chem.	XI Occup. Health & Safety	XII Toxicology	XIII Lab Improve. Program	XIV Biologic, Reagent, Media Prod.	XV Research and Develop.			
New England																		
Conn.	23 (+6)	1 (−4)	3 (−5)	3 (−6)	14 (+7)	3 (−1)	7	1 (−2)	7 (−2)	26 (−5)	5 (−1)	27 (+2)	8	4 (−1)	1 (+.2)		133	−11.8
Mass.	20 (+3)	1	1	12 (−4.6)	11.25 (−1.5)	–	14 (+1)	–	–	–	–	9	3 (−4)	37 (−4)	2		110.25	− 8.8
Me.	6		3	3 (+1)	–	–	1	–	8		8		2 (+1)	–	–		31	+ 2
N.H.	10 (−1)	.5	.5	–	–	–	–	–	–	–	–	–	.5	.5	–		12	− 1
R.I.	7			–	6 (−1)	–	7 (+2)	–	10 (+2)	19 (+2)	2 (+1)	16	1	–	–		68	+ 6
Vt.	5.8 (−.2)	0.3 (+.5)	0.8 (+.5)	0.7 (−1.3)	5.2 (+1.2)	–	–	–	2.0	2.0	–	2.0	0.1	1.0	–		19.9	+ .7
Middle Atlantic																		
N.J.	32	2	2	35	13	–	–	–	–	31	–	17	24	–	–		156	+ 6
N.Y.																		
Pa.																		
East North Central																		
Ill.	19 (+6)	2 (+1)	2 (+1)	12 (+1)	9 (−2)	–	1	–	12 (−1)	13	–	12 (+3)	5 (+2)	5 (+2)	–		92	+14
Ind.	10.5 (+.5)	1.5	1 (−1)	3 (−1.5)	6 (−1)	–	–	–	12 (+.5)	23 (+2)	–		2 (+.5)	–	–		59	–
Mich.	42.4 (+4.7)	1.7	2.5	14.5 (+.5)	14.2	2.5	3.5	–	5.5 (+.5)	3.7 (+1.5)	–	43	6	62.4 (−1)	51 (+11.6)		252.9	+17.8
Ohio	28 (−8)	1.0 (−.5)	1 (−.5)	7 (+1)	8 (+2)	1 (+1)	9	–	11 (+1.5)	19 (−1)	12 (−2)	2	6 (+2.5)	2 (−4)	1		108	− 8
Wisc.	18.5	1.5	1.5	13	15	–	9	16	2	8 (+2)	2	7 (+1)	–	–	1.75 (+1)		95.25	+ 4
West North Central																		
Ia.	7	2	.5	9	6	–	2	–	5	20	4	4	2.5	5	0		67	–
Kans.	12	1	2	4	4	–	–	–	4.2 (+1)	14.2 (+3)	1	5	4	–	–		51.4	+ 5
Minn.	8.75 (+1)	2.0 (+1)	2.25 (−1)	10.0 (−1)	12.0 (−2)	–	3.0 (+2)	3.0 (+3)	–	–	–	–	4.0 –	2.0 –	–		47	+ 3
Mo.	9	.5	.5	5	6	–	1	–	5	4	–	–	6	2	–		39	+ 4
Nebr.	5	.2	.8	–	2.5 (−1)	–	–	–	1.5	3.5	–	7	–	.5	–		21	− 1
N.O.	5.8 (+1.4)	.3 (+.1)	.2 (+.5)	.3 (+.5)	2.7 (+.6)	–	.6 (+.1)	–	2.8 (+6)	9.0 (+2)	–	–	.6 (+.1)	.7 (+.1)	–		23	+ 6
S.O.	4	–	–	–	2	–	–	–	2	5	–	–	–	–	–		1	–
South Atlantic																		
Del.	3.5 (−1.4)	.1	.2	3.0 (+2.55)	1.55	–	1.95	5.99 (−.96)	2.35	2.50	.01	.5	.45	–	–		22.1	+ .2
D.C.	7 (+2)	2	–	– (−2)	5 (−1)	3 (+1)	5 (+2)	7	2 (−1)	5	–	9	2	3	–		50	+ 1
Fla.																		
Ga.	26 (−2)	1.5	3.5	6.5 (−2)	16 (−1)	2.5	4 (−1)	–	0.1	–	–	7	–	4	–		71.1	− 6
Md.	48 (+1)	1.0 (−1)	1.0 (−2)	4	23 (+1)	12.0	17 (+3)	13 (+1)	19 (+2)	42.0 (+2)	4	2 (+1)	3	–	–		189.0	+ 8
N.C.	10 (−.25)	1	1	5 (−.25)	14	2.5	7.5 (−.25)	17	7 (−.25)	11.5 (+.5)	4.5 (−.5)	1 (+1)	5	–	–		87	–
S.C.	20.4	3	4 (+1)	3 (+.8)	16.9 (+.8)	6.3	7.5	.3 (−1.7)	3.9	5.9	–	6.5 (+1)	2 (−1)	3.5	–		83.2	+ .9
Va.	17.0	1.5	1.8	7.5	8.3	–	5.5	–	15.3	32		12	–	–	–		100.9 (A)	–
W.Va.	9			3	3	(C)	5	4	3	–	–	–	4	–	–		31	–
East South Central																		
Ala.	52 (+2)	3	10 (+1)	3 (−6)	14 (+1)	4	3	3	16	–	–	–	–	13	–		121	− 1
Ky.	5	1	1	4	10	3	3	–	6 (+1)	5 (+2)	7 (+2)	5	–	4	–		54	+ 5
Miss.																		
Tenn.	37 (−2.5)	1 (−.5)	5 (+2.5)	10 (+7)	18 (+4)	1 (+1)	–	–	10 (−.5)	–	–	– (−13)	– (−2)	1 (−1)	–		83	− 5
West South Central																		
Ark.	13 (+1)	2	1	4	3	2	2	–	6	–	–	–	2	–	–		35	+ 1
La.	7	1	1	1	10	–	1	–	11	13	–	–	–	–	–		–	–
Okla.	8.8	.5	.8	3.0	9.1	.7	1.7	–	6.1	1.4	–	–	1.7	–	.7		34.5	–
Tex.	31.0	1	7 (+2)	10	10 (+1)	9	2	–	6	33 (+3)	2	2	3	16	–		132	+ 6
Mountain																		
Ariz.	4	3	(D)	2	4	–	(−1)	–	3	8	1	–	4	5	–		35	− 1
Colo.	12	4		4	–	–	–	–	3	15	2	4	2	–	–		46	–
Ida.	10.5		2.5	1	2.5 (+.5)	–	.5	6.5	8.5 (−.5)	–	8.5 (+1)	1.5 (+1)	–	6 (+1)		48	+ 3
Mont.	3.7	.1	.1	2.0	1	–	–	–	2	8.38	.5	–	.1	3	–		20.88	+9.88
Nev.	2		.5	1.5	1	1	–	–	1	3	–	–	1	2	–		13	–
N.M.	6.6 (+.4)	1 (+.7)	.4 (−.1)	3 (+1)	2.7 (+.1)	.3 (+.1)	1	–	6	10 (−3)	–	5 (+3)	–	–	–		36	+ 2.3
Utah	4	1	1	4	3	–	–	–	3	12 (−2)	1	10 (+4)	3	1	–		43	+ 2
Wyo.	4.2 (−.8)	–	.3 (+.3)	–	1.0	–	–	–	.5 (+.5)	–	–	3.0 (+1)	1.0	–	–		10	+ 1
Pacific																		
Alaska	9(8)	–	–	2	–	–	–	–	–	1	–	–	–	–	–		12	–
Cal.	13	6	3	18	12	–	11	–	2	78	34	1	33	3.5	13		227.5	–
Hawaii	9 (+1)	.5	1	2	3	–	1	–	6.5	12.5 (−1)	–	.5	1.5	–	–		37.5	–
Ore.	5	1	1	3 (+1)	11 (−1)	–	5.75	–	4.25	–	–	–	3	–	–		34.0	–
Wash.	7	1	1	2	2	1	–	–	4	10	–	–	7	–	–		35 0	–
Territories																		
Guam	3	–	1	1	1	1	1	–	1	–	–	–	–	1	–		10	–
P.R.																		
V.I.																		

A — Covers only those positions related to the 15 workload categories.
B — Positions cover categories I, II, III, V, IX, and XIII.
C — Positions cover categories I, II, III, VI.
D — Positions cover categories I, III.

SECTION III
FINANCE

Table 3-1
LABORATORY EXPENDITURES BY CATEGORY

Lab & Region	Total Laboratory Expenditures	EXPENDITURE CATEGORY											
		Personnel				Supplies & Material		Equipment		General Operating Exp.		Other	
		Salaries	Benefits	Salaries/ Benefits %	% of Total Exp.	Amount	% of Total Exp.	Amount	% of Total Exp.	Amount	% of Total Exp.	Amount	% of Total Exp.
TOTAL	**101,039,869**	**65,363,231**	**9,365,878**			**10,923,598**		**3,277,086**		**8,791,322**		**3,318,754**	
Average	1,981,174	1,281,632	–	–	74.0	214,188	10.8	64,257	3.2	172,379	8.7	65,074	3.3
New England	**9,880,052**	**6,632,912**	**846,048**	**–**	**75.7**	**1,058,605**	**10.7**	**181,217**	**1.8**	**886,947**	**9.0**	**274,323**	**<1**
Conn.	3,443,716	2,419,505	524,943	21.7	86.5	292,277	8.5	104,846	3.0	100,143	2.9	2,002	<1
Mass.	3,121,830	2,085,083			66.8	315,150	10.1	24,599	<1	696,948	22.3	1,060	<1
Me.	734,876	403,446	63,718	15.8	63.6	175,373	23.9	1,600	<1	78,931	10.7	11,908	<1
N.H.	290,393	206,643	27,213	13.2	80.5	55,300	19.4	780	<1	–	–	457	<1
R.I.	1,908,787	1,219,323	207,285	17.0	74.8	169,675	8.9	43,237	2.3	11,925	<1	257,342	13.6
Vt.	380,451	298,912	22,889	7.7	84.6	50,830	13.4	6,256	1.6	–	–	1,564	<1
Middle Atlantic	**4,063,802**	**2,371,578**	**428,067**	**–**	**68.9**	**415,946**	**10.2**	**97,177**	**2.4**	**37,600**	**<1**	**713,438**	**17.8**
N.J.	4,063,802	2,371,676	428,067	18.1	68.9	416,946	10.2	97,177	2.4	37,600	<1	713,438	17.6
N.Y.													
Pa.													
East North Central	**19,424,908**	**12,748,911**	**2,575,506**	**20.2**	**78.9**	**1,692,826**	**8.7**	**368,529**	**1.9**	**1,660,958**	**8.8**	**378,376**	**1.9**
Ill.	2,589,143	1,766,492	317,968	18.0	80.6	293,528	11.3	11,665	<1	144,600	6.6	66,000	2.1
Ind.	1,731,629	1,206,093	192,815	16.0	80.7					329,567	19.0	4,064	<1
Mich.	9,598,973	8,122,646	1,313,269	21.4	77.6	639,367	6.6	230,863	2.4	1,087,460	11.3	306,489	3.2
Ohio	2,423,829	1,702,863	340,671	20.0	84.3	267,116	10.6	64,112	2.2	57,461	2.3	11,728	<1
Wisc.	3,081,432	1,961,928	410,883	21.0	78.7	602,615	19.6	71,909	2.3	42,000	1.4	2,097	<1
West North Central	**7,082,999**	**4,440,311**	**621,502**	**14.1**	**70.9**	**834,605**	**11.8**	**499,077**	**7.0**	**823,748**	**8.8**	**103,758**	**1.6**
Ia.	2,262,118	1,238,711	182,688	14.7	63.1	307,376	13.6	236,962	10.5	246,443	10.9	41,061	1.8
Kans.	1,377,609	864,770	129,716	16.0	72.2	126,291	9.2	63,769	4.6	177,163	12.9	16,811	1.2
Minn.	1,369,170	1,004,043	150,606	15.0	84.3	134,733	9.8	–	–	77,883	6.7	1,906	<1
Mo.	837,046	616,145	63,678	12.3	69.3	166,071	19.7	56,694	6.7	16,326	2.0	19,231	2.3
Nebr.	387,082	250,017	28,370	11.3	71.9	42,414	11.0	19,320	6.0	38,809	10.0	8,152	2.1
N.D.	618,036	327,027	39,321	12.0	70.7	16,429	3.2	72,462	14.0	46,825	9.0	15,981	3.1
S.D.	342,040	199,698	27,226	13.6	66.3	42,292	12.4	61,000	14.9	20,297	6.9	1,627	<1
South Atlantic	**21,096,897**	**14,960,051**	**1,091,169**	**–**	**78.1**	**3,172,144**	**15.0**	**757,527**	**3.6**	**981,451**	**4.7**	**134,555**	**<1**
Del.	474,066	295,000	58,000	19.7	74.5	66,448	11.7	42,418	8.9	15,700	3.3	7,600	1.6
D.C.	1,166,864	902,472	74,892	8.3	83.4	166,300	13.4	33,200	2.9	–	–	–	–
Fla.	3,727,734	2,324,547	380,976	16.4	72.8	624,356	16.7	112,286	3.0	216,927	6.8	69,644	1.9
Ga.	2,086,717	1,432,748	237,628	16.6	80.1	313,227	15.0	66,910	3.2	15,710	<1	20,494	1.0
Md.	3,741,262	3,012,959			80.5	628,948	14.1	18,462	<1	178,215	4.8	2,668	<1
N.C.	2,343,180	1,413,169	239,660	17.0	70.5	406,603	17.3	208,868	8.9	64,421	2.7	11,481	<1
S.C.	1,610,696	1,146,698	56,981(B)	13.6	79.7	241,590	16.0	18,836	1.2	33,167	2.2	13,624	<1
Va.	5,106,000	3,865,000			75.7	550,000	10.7	240,000	4.7	450,000	8.8	–	–
W. Va.	942,388	567,668	43,033	7.5	64.8	296,672	31.5	17,560	1.9	8,311	<1	9,264	<1
East South Central	**7,358,163**	**4,756,873**	**546,919**	**11.5**	**72.1**	**841,453**	**11.4**	**70,388**	**<1**	**591,865**	**8.1**	**550,665**	**7.5**
Ala.	2,818,276	2,079,682	167,969	8.1	79.6	426,982	16.1	17,438	<1	112,314	4.0	13,900	–
Ky.	1,621,000	863,246	142,436	16.6	62.0	148,103	9.1	31,178	1.9	279,621	17.2	156,416	9.7
Miss.	771,285	496,261	71,589	14.5	73.5	142,639	18.5	2,938	<1	56,318	7.3	2,540	<1
Tenn.	2,147,603	1,318,684	164,936	12.5	68.2	123,729	5.8	18,834	<1	143,612	6.7	377,809	17.6
West South Central	**7,565,877**	**4,706,856**	**742,561**	**15.8**	**72.0**	**953,474**	**12.7**	**523,089**	**6.9**	**604,396**	**8.0**	**35,501**	**<1**
Ark.	714,664	621,606	81,160	16.6	84.3	93,676	13.1	1,866	<1	16,366	2.3	–	–
La.	1,953,692	1,432,444	148,300	10.4	80.9	159,244	8.2	26,255	1.3	183,494	9.4	3,955	<1
Okla.	856,322	593,324	110,899	18.7	82.2	102,918	12.0	13,654	1.6	23,819	2.8	11,808	1.4
Tex.	4,041,199	2,159,482	402,212	18.6	63.4	597,636	14.8	481,414	11.9	380,717	9.4	19,738	<1
Mountain	**7,535,233**	**4,823,523**	**594,897**	**12.3**	**71.9**	**821,412**	**10.9**	**269,406**	**3.6**	**499,171**	**6.8**	**526,824**	**7.0**
Ariz.	1,145,869	735,983	112,237	15.2	74.0	158,704	13.8	1,856	<1	116,900	10.2	20,189	1.8
Colo.	1,373,421	918,228	116,083	12.6	75.3	251,971	18.3	4,197	<1	76,492	5.6	6,450	<1
Ida.	1,457,103	1,080,753		19.3	74.2	–	–	–	–	–	–	376,360	26.8
Mont.	323,893	218,767	31,239	14.3	77.2	19,642	6.1	7,479	2.3	18,118	5.6	28,658	8.9
Nev.	471,841	306,962	55,096	17.9	76.7	45,800	9.7	9,450	2.0	47,033	10.0	7,500	1.6
N.M.	1,308,000	641,886	87,796	13.7	55.8	223,276	17.1	180,341	13.8	110,147	8.4	64,554	4.9
Utah	1,103,750	748,025	157,859	21.0	82.1	95,940	8.7	46,796	4.2	47,041	4.3	8,089	<1
Wyo.	351,356	172,929	34,587	20.0	59.1	26,079	7.4	19,287	5.5	83,440	23.7	15,034	4.3
Pacific	**16,021,437**	**9,118,978**	**1,874,630**	**–**	**68.6**	**1,064,027**	**6.6**	**487,148**	**3.0**	**2,893,679**	**18.1**	**582,975**	**3.6**
Alaska	1,171,177	686,519	142,000	21.7	70.7	121,379	10.4	8,466	<1	202,000	17.2	10,823	<1
Cal.	11,441,273	6,159,548	1,463,968	23.8	66.6	542,068	4.7	289,786	2.5	2,566,679	22.4	419,224	3.7
Hawaii	912,672	755,158	(A)	–	82.7	90,440	9.9	65,074	7.1	–	–	2,000	<1
Ore.	1,042,615	602,753	103,962	17.2	67.8	215,140	20.6	23,832	2.2	–	–	96,928	9.3
Wash.	1,453,700	915,000	164,700	18.0	74.3	95,000	6.5	100,000	6.9	125,000	8.6	54,000	3.7
Territories	**1,010,503**	**843,240**	**44,579**	**–**	**87.6**	**69,306**	**8.9**	**23,528**	**2.3**	**11,509**	**1.1**	**18,341**	**1.8**
Guam	130,108	102,268	11,734	11.5	87.6	16,106	12.4	–	–	–	–	–	–
P.R.	880,395	740,972	32,845	4.4	87.9	53,200	6.1	23,528	2.6	11,509	1.3	18,341	2.1
V.I.													

A. Not included in budget (22% Supplemental)
B. Fringe benefits for Salaries on NON-STATE funds, STATE fringe benefits amount N/A.

Table 3-2
SOURCES OF LABORATORY FUNDS

Lab & Region	Total Laboratory Budget	STATE FUNDS		FEDERAL FUNDS		EARNED FUNDS		OTHER FUNDS	
		Amount	% of Total Exp.	Amount	% of Total Exp.	Amount	% of Total Exp.	Amount	% of Total Exp.
TOTAL	**101,039,869**	**71,644,891**		**21,780,581**		**6,455,163**		**1,159,234**	
Average	1,981,174	1,404,802	70.9	427,070	21.6	126,572	6.4	22,730	1.1
New England	**9,880,052**	**7,934,522**	**80.3**	**1,562,143**	**15.8**	**329,321**	**3.3**	**54,066**	**<1**
Conn.	3,443,715	3,123,224	90.7	320,491	9.3	—	—	—	—
Mass.	3,121,830	2,705,414	86.7	416,416	13.3	—	—	—	—
Me.	734,876	214,087	29.1	137,402	18.7	329,321	44.8	54,066	7.4
N.H.	290,393	194,593	67.0	95,800	33.0	—	—	—	—
R.I.	1,908,787	1,493,644	78.3	415,143	21.7	—	—	—	—
Vt.	380,451	203,560	53.5	176,891	46.5	—	—	—	—
Middle Atlantic	**4,063,802**	**3,114,872**	**76.7**	**858,143**	**21.1**	**66,551**	**1.6**	**24,236**	**<1**
N.J.	4,063,802	3,114,872	76.7	858,143	21.1	66,551	1.6	24,236	<1
N.Y.									
Pa.									
East North Central	**19,424,906**	**13,007,167**	**67.0**	**4,695,820**	**24.2**	**1,577,771**	**8.1**	**144,148**	**<1**
Ill.	2,589,143	594,782	23.0	1,994,361	77.0	—	—	—	—
Ind.	1,731,529	1,496,354	86.4	235,175	13.6	—	—	—	—
Mich.	9,598,973	8,099,646	84.4	1,360,519	14.2	22,851	<1	115,957	1.2
Ohio	2,423,829	751,234	31.0	999,282	41.2	673,313	27.8	—	—
Wisc.	3,081,432	2,065,151	67.0	106,483	3.5	881,607	28.6	28,191	<1
West North Central	**7,082,999**	**3,853,605**	**54.4**	**2,104,514**	**29.7**	**435,389**	**6.2**	**689,491**	**9.7**
Ia.	2,252,118	1,191,500	52.9	13,596	<1	427,177	19.0	619,845	27.5
Kans.	1,377,509	1,019,788	74.0	357,721	26.0	—	—	—	—
Minn.	1,369,170	1,050,870	76.8	318,300	23.2	—	—	—	—
Mo.	837,045	121,482	14.5	651,039	77.8	—	—	64,524	7.7
Nebr.	387,082	156,658	40.5	222,212	57.4	8,212	2.1	—	—
N.D.	518,035	171,185	33.0	346,850	67.0	—	—	—	—
S.D.	342,040	142,122	41.6	194,796	57.0	—	—	5,122	1.5
South Atlantic	**21,096,897**	**17,058,416**	**80.9**	**3,412,655**	**16.2**	**557,822**	**2.6**	**68,004**	**<1**
Del.	474,066	283,066	59.7	191,000	40.3	—	—	—	—
D.C.	1,166,864	944,643	81.0	217,221	18.6	5,000	<1	—	—
Fla.	3,727,734	2,326,069	81.0	1,323,585	35.5	10,076	<1	68,004	1.8
Ga.	2.085,717	1,940,703	93.1	145,014	6.9	—	—	—	—
Md.	3,741,252	3,640,960	97.3	100,292	2.7	—	—	—	—
N.C.	2,343,180	1,426,761	60.9	675,551	28.8	240,868	10.2	—	—
S.C.	1,510,696	955,487	63.2	253,331	16.8	301,878	20.0	—	—
Va.	5,105,000	4,941,100	96.8	163,900	3.2	—	—	—	—
W. Va.	942,388	599,627	63.6	342,761	36.4	—	—	—	—
East South Central	**7,358,163**	**5,399,032**	**73.4**	**1,737,938**	**23.6**	**133,006**	**1.8**	**88,187**	**1.2**
Ala.	2,818,275	1,742,400	61.8	1,075,875	38.2	—	—	—	—
Ky.	1,621,000	1,362,056	84.0	170,757	10.5	—	—	88,187	5.4
Miss.	771,285	210,404	27.3	428,277	55.5	132,604	17.2	—	—
Tenn.	2,147,603	2,084,172	97.0	63,029	2.9	402	<1	—	—
West South Central	**7,565,877**	**5,128,337**	**67.8**	**1,925,154**	**25.4**	**431,310**	**5.7**	**81,076**	**1.1**
Ark.	714,664	400,542	56.0	314,122	44.0	—	—	—	—
La.	1,953,692	1,882,989	96.4	—	—	—	—	70,703	3.6
Okla.	856,322	442,433	51.7	403,516	47.1	—	—	10,373	1.2
Tex.	4,041,199	2,402,373	59.4	1,207,516	29.9	431,310	10.7	—	—
Mountain	**7,535,233**	**4,623,983**	**61.4**	**2,604,050**	**34.6**	**306,293**	**4.1**	**907**	**<1**
Ariz.	1,145,869	461,758	40.3	683,204	59.6	—	—	907	<1
Colo.	1,373,421	687,210	50.0	619,601	45.1	66,610	4.8	—	—
Ida.	1,457,103	861,495	59.1	489,495	33.6	106,113	7.3	—	—
Mont.	323,893	173,319	53.5	147,804	45.6	2,770	<1	—	—
Nev.	471,841	362,735	76.9	109,106	23.1	—	—	—	—
N.M.	1,308,000	1,085,640	83.0	91,560	7.0	130,800	10.0	—	—
Utah	1,103,750	789,675	71.5	314,075	30.9	—	—	—	—
Wyo.	351,356	202,151	57.5	149,205	42.5	—	—	—	—
Pacific	**16,021,437**	**10,638,090**	**66.4**	**2,765,647**	**17.3**	**2,617,700**	**16.3**	**—**	**—**
Alaska	1,171,177	1,096,177	93.6	75,000	6.4	—	—	—	—
Cal.	11,441,273	6,962,654	60.9	1,901,110	16.6	2,577,509	22.5	—	—
Hawaii	912,672	760,661	83.3	152,011	16.7	—	—	—	—
Ore.	1,042,615	739,898	71.0	262,526	25.2	40,191	3.8	—	—
Wash.	1,453,700	1,078,700	74.2	375,000	25.8	—	—	—	—
Territories	**1,010,503**	**886,867**	**87.8**	**114,517**	**11.3**	**—**	**—**	**9,119**	**<1**
Guam	130,108	59,850	46.0	70,258	54.0	—	—	—	—
P.R.	880,395	827,017	93.9	44,259	5.0	—	—	9,119	1.0
V.I.									

TABLE 3-3
GRANTS, CONTRACTS, OR SPECIAL SERVICE AGREEMENTS WITH OTHER DEPARTMENTS OR AGENCIES (PRIVATE, FEDERAL, STATE, OR LOCAL)

Lab	Source of Funds Programs Served & Services Provided	Staff Utilized	FTE*	Costs	
Ala.	Federal				
	Medicaid Contract (Sickle Cell)	Micro V Micro IV Micro II Micro I Lab Tech III Clerk Typist II	0.3 0.5 0.8 0.8 0.8 0.9	Pers. Supp. Equip. Other Total	48,677 1,752 2,953 712 54,094
	Medicaid Contract (Intestinal Parasites)	Micro IV Micro III Micro I Lab Tech II Lab Tech I Clerk Steno II Clerk Typist II	0.3 0.5 0.8 0.8 0.3 0.3 0.3	Pers. Supp. Equip. Other Total	39,311 4,449 1,458 2,142 47,360
	Medicaid Contract (Pin Worm)	Micro IV Micro III Lab Tech II Clerk Steno I Clerk Typist II	0.1 0.1 0.2 0.1 0.1	Pers. Supp. Equip. Other Total	5,933 890 648 827 8,298
	Lead Screening Program (Blood Lead Analysis)	Micro IV Micro I	1.0 1.0	Pers. Supp. Equip. Other Total	27,274 12,000 40,000 1,500 80,774
Alaska	Federal				
	VD Control (VD Laboratory Support)	Micro Lab. Asst. Clerk	1.0 1.0 1.0	Pers. Total	32,000 32,000
	TB Contract — Alaska Native Health Service (TB Laboratory Support)	—	—	Supp. Total	15,900 15,900
	Rubella Serology and Metabolic Disorders Screening (PKU, etc)	Micro Clerk	1.0 1.0	Pers. Total	27,100 27,100
	Alaska Native Health Service and U.S. Forest Service Environmental Chemistry (Chemical Analysis of Water Samples)	—	—	Supp. Total	7,000 7,000
	State				
	Dept. of Public Safety—Highway Safety (Breatholyzer Documentation and Record System)	Adm. Asst.	1.0	Pers. Supp. Equip. Other Total	8,000 2,000 4,000 4,000 18,000
	Dept. of Fish & Game (Detection of IAHV Virus in Salmon Hatchery Stock and Vaccine Development.)	—	—	Supp. Total	5,000 5,000
Ariz.	Federal				
	Highway Safety Project (Blood Alcohol Certification)	Chemist III Typist I	0.1 0.1	Supp. Total	5,221 5,221
	HIB (Medicare) (Laboratory Certification)	Lab Consultant Surveyor Typist II	1.0 1.0	Pers. Supp. Other Total	22,348 961 2,118 25,427
	Safe Drinking Water—EPA (Environmental Lab. Certification)	Consultant Surveyor Typist II	1.0 1.0	Pers. Supp. Other Total	275 864 1,789 2,928

*FTE = Full Time Equivalent (Person)

Table 3-3
GRANTS, CONTRACTS, OR SPECIAL SERVICE AGREEMENTS WITH OTHER DEPARTMENTS OR AGENCIES (PRIVATE, FEDERAL, STATE, OR LOCAL) – Continued

Lab	Source of Funds Programs Served & Services Provided	Staff Utilized	FTE	Costs	
Ariz. (Cont.)	**Air pollution–EPA** (Lab. Analysis of Samples)	Chemist III	1.0	Pers. Total	20,618 20,618
	Water Pollution–EPA (Lab. Analysis of Samples)	Chemist III	1.0	Pers. Total	20,097 20,097
	Interstate Travelers Food-Plant Inspection–FDA (Lab Analysis of Samples)	Microbiologist	0.2	Supp. Other Total	237 117 354
	Laboratory Training Project–EPA (Environmental Laboratory Personnel Training)	–	–	Supp. Total	6,404 6,404
	State **Lung Association Grant** (Antigenicity Correlation Lab Analysis of Samples)	–	–	Supp. Total	907 907
	State Dairy Commissioner (Lab Analysis of Samples)	Chemist II Lab Tech II Typist II	1.0 3.0 1.0	Pers. Supp. Total	58,075 6,976 65,051
	Industrial Commission Contract (Lab Analysis of Samples)	Chemist III Lab Tech I	1.0 1.0	Pers. Supp. Other Total	28,790 3,138 1,056 32,984
Cal.	Local **Alameda, Contra Costa and Los Angeles County Blood Lead Project** (Analysis of blood lead and erythrocyte protoporphyrin)	Chemist II	1.0	Pers. Supp. Equip. Other Total	23,883 3,023 3,000 775 30,681
	State **State Department of Transportation** (Calibration of Air Monitoring Instruments)	Chemist II	1.5	Pers. Supp. Equip. Other Total	30,000 1,150 5,638 1,000 37,788
	State Air Resources Board (Research on the Characterization of Organic Matter)	Res. Sp. III Chemist I Assoc. Stat.	1.0 1.0 1.0	Pers. Supp. Other Total	78,276 3,000 659 81,935
	State Air Resources Board (Effect of Environmental Variables and Sampling Media on the Collection of Atmospheric Sulfate)	Chemist III Clk. Typ. II Res. Tech. Std. Asst.	1.0 0.5 1.0 0.6	Pers. Supp. Equip. Other Total	60,000 3,000 10,000 1,000 74,000
	State Air Resources Board (Size Selective Monitoring Tech. for Particulate Matter in Calif. Air)	Res. Sp. III Res. Asst. III	1.0 1.0	Pers. Supp. Equip. Other Total	55,586 3,500 16,588 6,210 81,884
	Federal **Federal Environmental Protection Agency** (Investigation of Particulate Matter Monitoring Using Contact Electricity)	Res. Sp. II Std. Asst.	0.5 0.2	Pers. Supp. Equip. Other Total	28,593 1,119 6,531 6,706 42,949

Table 3-3
GRANTS, CONTRACTS, OR SPECIAL SERVICE AGREEMENTS WITH OTHER DEPARTMENTS OR AGENCIES (PRIVATE, FEDERAL, STATE, OR LOCAL) – Continued

Lab	Source of Funds Programs Served & Services Provided	Staff Utilized	FTE	Costs
Cal. (Cont.)	**Federal Environmental Protection Agency** (Study of Wet Chemical & Instrumental Methods of Sulfate Determin. in Aerosols)	Chemist III	1.0	Pers. 25,000 Supp. 1,000 Other 500 Total 26,500
	Federal Environmental Protection Agency (Conf. on Methods in Air Pollution Studies)	Chemist III	0.5	Pers. 13,412 Supp. 1,000 Other 3,352 Total 17,764
	Department of Health, Education, and Welfare, Extramural Programs, National Institute of Allergy and Infectious Diseases (NIAID) (To apply electron microscopial technics to search for viruses or structures associated with viral infection from patients with chronic diseases such as systemic lupus erythematosis; Sjogren's disease; rheumatoid arthritis; amyotropic lateral sclerosis; multiple sclerosis. To study the mechanisms of infection of erythrocytes with Colorado tick fever virus, the pathogenesis of the disease in man, and experimentally infected animals. To use the electron microscope to aid in the detection and identification of viruses in organ culture systems for recovery of causative agents from acute respiratory diseases and from other infectious diseases in which etiologic agents are not found by present culture technics.)	Res. Asst. III Animal Tech. III	0.8 1.0	Pers. 36,090 Supp. 4,151 Equip. 900 Other 1,974 Total 43,115
	Department of Health, Education, and Welfare, Extramural Programs, National Institute of Allergy and Infectious Diseases (NIAID) (The objectives of this project are to isolate the cytopathogenic material found in the cell-free filtrates of lysed amebae from the genus *Naegleria*, and to determine the physical and biological characteristics of this material using standard techniques, tissue culture cells, and mice. The goals set for the current year were to establish cultures for large scale production of the amebae which are the source of the cytopathogen, isolate the material by chromatographic methods improving and modifying the procedures to obtain higher specific activities, study the biological effects of the of the partially purified material in various cell lines and in mice.)	Res. Spec. II Lab. Asst.	1.0 1.0	Pers. 38,886 Supp. 3,534 Equip. 3,843 Other 1,900 Total 48,163
	Private **National Multiple Sclerosis Society** (To determine antibody titers to viral agents in the spinal fluids and sera of multiple sclerosis patients and in like specimens from matched control patients. Titers will be determined by complement fixation, hemagglutination inhibition, fluorescent antibody and complement dependent serum cytotoxicity assays. Antibody titers to the following viral agents will be determined: measles, mumps, herpes simplex, vaccinia, parainfluenza I, cytomegalo and varicella viruses. Results will determine those viral agents to be selected for cellular immunity studies and will be correlated with the clinical course of the disease in individual patients. The large scale on which the study can be performed will provide data to confirm or deny earlier and more limited investigations of a similar nature.)	P.H. Micro. I	1.5	Pers. 23,890 Supp. 5,141 Other 5,969 Total 35,000
	Federal **National Institutes of Health, Procurement Branch/National Cancer Institute (NCI)** (These studies seek to further define the association of viruses with cancer, obtain evidence of their possible causative role in various types of tumors, and assess the use of experimental vaccines in laboratory animals to provide immunity against virus-induced tumors. Services provided are as follows: Identification, characterization and purification of tumors, tumor viruses, antigens and antisera. Production of cell cultures, viruses and chemicals for in vitro carcinogenesis.)	Res. Spec. IV P.H. Micro. II P.H. Micro. I P.H. Lab. Tech. Animal Tech. Pathologist	0.2 0.2 1.0 1.0 1.0 0.1	Pers. 67,909 Supp. 9,223 Other 19,968 Total 97,100

Table 3-3
GRANTS, CONTRACTS, OR SPECIAL SERVICE AGREEMENTS WITH OTHER DEPARTMENTS OR AGENCIES (PRIVATE, FEDERAL, STATE, OR LOCAL) – Continued

Lab	Source of Funds Programs Served & Services Provided	Staff Utilized	FTE	Costs
Cal. (Cont.)	**Funds provided by the Department's General Research Committee from NIH funds** (To study the inactivation of viruses and tumor cells by photoreaction with derivatives of psoralen—a procedure which selectively modifies only nucleic acid. To characterize psoralen-inactivated viruses and cells immunologically and by recently developed physical-chemical methods. To develop psoralen-inactivated cells and viruses as vaccines against certain animal cancers and human infectious diseases.)	1 Res. Spc. II	1.0	Pers. 17,000 Total 17,000
	Private **American Cancer Society – California Division** (Funds from the American Cancer Society are considered seed money to provide supplemental support for the postdoctoral fellow supported by General Research Support Funds.)	Animal Tech.	0.2	Pers. 4,583 Supp. 2,350 Equip. 3,067 Total 10,000
	State **State Water Resources Control Board, Division of Planning and Research** (Establish water virology laboratory unit, develop and evaluate procedures for virus concentration and removal from water and laboratory technics for virus assay of water samples. Evaluation of waste water treatment systems, and health significance of viruses in water environment.)	Res. Spec. IV	1.0	Pers. 81,725 Other 18,275 Total 100,000
	Federal **Environmental Protection Agency – PM-214** (Preparation of seed virus materials as unknowns for comparative virus sampling and analysis experiment and controls for same.)	P.H. Micro. I	0.5	Pers. 6,700 Supp. 598 Other 1,802 Total 9,100
	Department of Health, Education, and Welfare, Extramural Programs, National Institute of Allergy and Infectious Diseases (NIAID) (To develop and improve viral diagnostic tests; evaluate various immunological procedures for the diagnosis of human viral infections; characterize various viral antigens and antibodies and how they relate to the infectious process; elucidate the role of viral infections in the causation of certain chronic degenerative diseases, determine the natural ecology of arthropod-borne and other zoonotic virus diseases.)	Res. Spec. I P.H. Micro. II P.H. Micro. I Typist II Lab. Asst.	1.0 1.0 3.6 1.0 5.0	Pers. 185,580 Supp. 9,349 Other 2,000 Total 196,929
Conn.	Federal **Public Health Service Block Grants** (Radiological Health)	Sr. Env. Chemist	1.0	Pers. 17,538 Equip. 74 Other 17,127 Total 34,739
	(Community Health Screening)	Asst. Biochemist	1.0	Pers. 17,538 Supp. 7,000 Total 24,538
	(Solid Waste Management)	Chemist	1.0	Pers. 14,925 Total 14,925
	(Diagnostic Microbiology)	Sr. Micro.	1.0	Pers. 18,069 Supp. 15,000 Total 33,069
	(Food Borne Disease Testing)	Sr. Micro.	1.0	Pers. 15,945 Total 15,945
	(Gonorrhea Screening)	Micro.	1.0	Pers. 12,075 Supp. 10,366 Total 22,441

Table 3-3
GRANTS, CONTRACTS, OR SPECIAL SERVICE AGREEMENTS WITH OTHER DEPARTMENTS OR AGENCIES (PRIVATE, FEDERAL, STATE, OR LOCAL) – Continued

Lab	Source of Funds Programs Served & Services Provided	Staff Utilized	FTE	Costs	
Conn. (Cont.)	(Inborn Errors)	Med. Tech.	1.0	Pers. Supp. Total	10,911 7,200 18,111
	(Toxicology Reports)	Typist	1.0	Pers. Supp. Total	7,271 9,090 16,361
	(Laboratory Animal Care)	Lab. Helper	1.0	Pers. Supp. Total	8,597 1,700 10,297
	(Lab. Equipment Maint.)	Maint. Foreman	1.0	Pers. Supp. Total	12,428 1,000 13,428
	Federal Maternal & Child Health			Equip. Other Total	6,489 2,936 9,425
	(Lead Screening)	Biochemist	1.0	Pers. Supp. Total	13,025 2,124 15,149
	(Strep. Cultures)	Lab. Helper	1.0	Pers. Total	7,511 7,511
	(PKU Program)	Lab. Helper	1.0	Pers. Supp. Total	8,711 123 8,834
	Federal Medicare (Laboratory Improvement Program)	Clerk III Supv. Med. Exam. Med. Examiner Asst. Director	1.0 0.8 1.6 0.3	Pers. Total	63,359 63,359
	EPA (Safe Water Act)	–	–	Equip. Total	19,185 19,185
	Swine Flu (Serologic Tests)	–	–	Equip. Total	368 368
	WIN Program (Central Services)	Lab. Helper	3.0	Pers. Total	28,768 28,768
D.C.	Federal MIC/CY Project (Clinical Lab. Testing in Hematology, Clinical Chemistry, Pathology)	Medical Techs.	4.0	Pers. Supp. Total	49,164 5,000 54,164
	V. D. Project – GC (Testing of Female Specimens for N. gonorrhoeae)	Medical Techs. Clerk	3.0 1.0	Pers. Supp. Total	42,115 30,000 72,115
	Meat Inspection (Microbiological & Chemical Testing of Meat Samples)	Chemist Micro. Tech.	1.0 1.0 1.0	Pers. Total	38,700 38,700
	Lead Poisoning Prevention Project (Chemical Assays on Children's Specimens for EP and Lead)	Chemist Tech. Clerk	1.0 1.0 1.0	Pers. Supp. Total	52,942 4,300 57,420

Table 3-3
GRANTS, CONTRACTS, OR SPECIAL SERVICE AGREEMENTS WITH OTHER DEPARTMENTS OR AGENCIES (PRIVATE, FEDERAL, STATE, OR LOCAL) – Continued

Lab	Source of Funds Programs Served & Services Provided	Staff Utilized	FTE	Costs
Ga.	Federal Sexually Transmitted Disease Unit (GC Culture Program)	Lab. Assoc. II Lab. Sc. II Lab. Tech. II Clerical	1.0 1.0 3.0 2.0	Pers. 68,004 Supp. 38,853 Total 106,857
	Division of Mental Health (Urine Test for Abuse Drugs)	Lab. Assoc. II Lab. Assoc. I Lab. Tech. III Lab. Tech. II Clerical	1.0 1.0 2.0 2.0 1.0	Pers. 89,952 Supp. 36,900 Other 18,162 Total 145,014
Ida.	Federal Environmental Protection Agency (Water Laboratory Supervision)	Chemist Clerical	0.2 0.2	Pers. 9,000 Supp. 2,365 Equip. 4,835 Total 16,200
	Traffic Safety Commission (Alcohol Testing)	Chemist Clerical	1.8 0.8	Pers. 28,000 Supp. 25,531 Equip. 3,809 Total 57,340
	Community Pesticides Project (Pesticides Study)	Chemist Microbiologist Administrative Technician Clerical	1.5 2.0 1.0 2.0 1.0	Pers. 108,000 Supp. 27,000 Total 135,000
	LEAA Funds – Idaho LEPC (Paint & Flammable Liquids)	–	–	Equip. 23,787 Total 23,787
	(Field Identification Kits for Law Enforcement Personnel)	Lab. helper	0.2	Supp. 5,881 Total 5,881
	(Forensic Lab. Testing – Branch Lab, Coeur d'Alene)	Chemist	0.8	Pers. 8,200 Supp. 3,858 Equip. 11,942 Total 24,000
	(Forensic Lab Testing – Branch Lab, Pocatello)	Chemist	0.8	Pers. 8,200 Supp. 7,200 Equip. 8,600 Total 24,000
	Environmental Protection Agency (Study of PCB & Pesticides in Human Milk)	Chemist	1.5	Pers. 13,200 Total 13,200
Ia.	State Medicare (Evaluation and Certification of Participating Laboratories)	Lab. Surveyor X-ray Surveyor	1.0 0.5	Pers. 30,524 Other 12,593 Total 43,117
	Air Quality (Lab. Services for Air Quality Monitoring to the Iowa Dept. of Env. Quality)	Chemist	3.0	Pers. 44,561 Supp. 21,312 Equip. 36,343 Other 31,159 Total 133,375
	Water Quality (Lab. Services for Water Quality Surveillance to the Iowa Dept. of Env. Quality)	Limnologists Tech.	2.0 3.0	Pers. 78,604 Supp. 12,180 Equip. 173,524 Other 29,828 Total 294,136

Table 3-3
GRANTS, CONTRACTS, OR SPECIAL SERVICE AGREEMENTS WITH OTHER DEPARTMENTS OR AGENCIES (PRIVATE, FEDERAL, STATE, OR LOCAL) – Continued

Lab	Source of Funds Programs Served & Services Provided	Staff Utilized	FTE	Costs	
Ia. (Cont.)	**Federal**				
	National Evaluation of X-ray Trends in Iowa (X-ray Survey for FDA)	Surveyor	0.5	Pers. Other **Total**	8,243 5,353 **13,596**
	State				
	Rubella Screening (Screening of Prenatal Sera for Rubella Susceptible Mothers)	Tech. Clerical	3.0 0.5	Pers. Supp. Other **Total**	36,003 5,253 3,955 **45,211**
	A/New Jersey Influenza (Screening for incidence of A/NJ for Iowa SDH)			Supp. **Total**	4,916 **4,916**
	Gonorrhea Culture Program (GC Screening Service to Physicians to Detect Asymptomatic Patients)	Micro.	1.0	Pers. Supp. Other **Total**	12,202 1,063 15,548 **28,813**
	Industrial Hygiene (Provision of Lab. Services to the Iowa Bureau of Labor)	Chemist Tech.	2.0 1.0	Pers. Supp. Equip. Other **Total**	42,512 8,453 6,308 12,478 **69,751**
Kans.	**Federal**				
	VD Control Project (Gonorrhea Screening)	Micro. Lab. Tech. Clerical	1.0 0.5 0.2	Supp. **Total**	6,390 **6,390**
	Water Pollution Control Project (Support for National Pollution Discharge Elimination System PL-92-500).	Chemist Micro. Lab. Tech.	3.0 1.0 2.0	Pers. **Total**	72,197 **72,197**
	Water Supply Program (Support for Safe Drinking Water Act [PL-93-523] requirement in Form of Equipment Grant)	Chemist Lab. Tech.	2.0 1.0	Pers. **Total**	29,730 **29,730**
	Air Quality Program (Sulfur Dioxide and Suspended Particulate Monitoring from 56 Air Sampling Sites)	Chemist Clerical	1.0 0.1	Pers. **Total**	15,605 **15,605**
Ky.	**Federal**				
	Maternal & Child Health (PKU, Rh, and Galactosemia Testing)	Microbiologist	2.5	Pers. Supp. Equip. **Total**	40,150 14,300 550 **55,000**
	Natural Resources & Environmental Protection (Bacterial & Chemical Testing of Public Water)	Microbiologist Chemist Survey Officer	3.1 1.8 1.0	Pers. Supp. Equip. **Total**	109,602 12,894 6,448 **128,944**
	Department of Labor (Analysis of Occupational Samples and Specimens)	Chemist	4.9	Pers. Supp. Equip. **Total**	59,250 5,250 10,500 **75,000**
Me.	**Federal**				
	Pediatric Blood Lead Screening	Analytical Chemists	2.0	Pers. Supp. Other **Total**	18,362 7,000 1,150 **26,512**
	Pesticide Monitoring	Analytical Chemists	1.5	Pers. Supp. Other **Total**	26,554 1,000 1,000 **28,554**

Table 3-3
GRANTS, CONTRACTS, OR SPECIAL SERVICE AGREEMENTS WITH OTHER DEPARTMENTS OR AGENCIES (PRIVATE, FEDERAL, STATE, OR LOCAL) – Continued

Lab	Source of Funds Programs Served & Services Provided	Staff Utilized	FTE	Costs	
Md.	Federal Cervical Cancer Screening (Pap Smear Screening of Women Ineligible for Other Public Health Programs)	Lab. Asst. I Lab. Sci. II Lab. Sci. I Typist Clerk	1.0 1.0 1.0 1.0	Pers. Supp. Total	19,957 410 20,367
	Air Quality Control Program (Constant Pollutants Monitoring Throughout the State of Maryland)	Lab. Sci. Lab. Asst. Typist Clerk	6.0 5.0 1.0	Pers. Total	30,000 30,000
	Occupational Health – Division of Labor and Industry – Program (Testing of Samples Submitted by MOSHA Program)	Lab. Asst. II Lab. Asst. III Lab. Sci. II	1.0 1.0 1.0	Pers. Supp. Equip. Other Total	30,525 2,786 6,762 1,513 41,586
Mass.	Federal Influenza Survey (Intensive Surveillance Program for Influenza)	Microbiologist Clerical	3.0 1.0	Pers. Supp. Equip. Total	37,500 12,000 500 50,000
Mo.	State State Milk Board (1. Lab. Inspection and Approval) (2. Performance of Lab. Tests on Milk)	Microbiologist	0.5		
	Dept. of Natural Resources (1. Public Water Supply Testing Bacteriological and Chemical) (2. Lab Inspection)	Microbiologist Chemist	0.4		
	Federal Division of Highway Safety (Breath Alcohol Maintenance and Calibration Program)	Chemist	4.0		
	Federal Drug Administration (Performance of Lab Tests on Food Samples)	Chemist	0.3		
Mont.	Federal Highway Alcohol (Alcohol Testing)	Chemist IV Chemist II Tech. II	1.0 0.8 1.0	Pers. Supp. Other Total	40,535 8,132 1,200 49,867
	State Southwest Montana and Lighthouse Drug Programs. (Drug Screening)	Chemist II	0.2	Pers. Supp. Total	2,712 2,288 5,000
	Infant Screening for Inborn Errors of Metabolism (Metabolic Disorders)	Bur. Chief Div. Adm. Clerk/Typist	0.2 0.1 1.0	Pers. Supp. Other Total	23,946 3,378 24,768 52,092
N.J.	Federal General Health (Various)			Pers. Supp. Equip. Other Total	474,337 37,000 46,317 1,313 558,967
	Maternal & Child Health (PKU Screening)			Pers. Total	19,563 19,563
	Venereal Disease Program (VD Control)			Pers. Other Total	68,646 16,414 85,060

Table 3-3
GRANTS, CONTRACTS, OR SPECIAL SERVICE AGREEMENTS WITH OTHER DEPARTMENTS OR AGENCIES (PRIVATE, FEDERAL, STATE, OR LOCAL) – Continued

Lab	Source of Funds Programs Served & Services Provided	Staff Utilized	FTE	Costs
N.J. (Cont.)	**Crippled Children Program** (PKU)			Pers. 51,011 Supp. 8,000 Other 200 **Total** 59,211
	Hepatitis Project (Hepatitis Testing)			Pers. 21,909 Supp. 1,260 Other 4,174 **Total** 27,343
	Cancer Research (Bladder Cancer Research)			Pers. 59,021 Supp. 1,413 Equip. 4,971 **Total** 65,405
	Private **CETA Project**			Pers. 23,853 **Total** 23,853
	State of Delaware (Diagnostic Virology)			Pers. 6,910 **Total** 6,910
	State **Dept. of Environmental Protection** (All Laboratory Support)			Pers. 365,955 Supp. 22,500 **Total** 388,455
	Other **Rabies Control** (Support Rabies Exam.)			Pers. 59,224 Supp. 9,350 **Total** 68,574
	Laboratory Revolving Fund Proceeds from the Sale of Services (VDRL, Rubella Screening, Bact. Exam. of Potable Water and Blood Lead)			Pers. 65,960 Supp. 591 **Total** 66,551
N.M.	**Federal** **Highway Traffic Safety** (Breath/Blood Alcohol Analysis)	2 (Part Time)	0.3	Pers. 8,459 Supp. 5,447 Equip. 3,367 Other 3,899 **Total** 21,172
N.C.	**State** **Sickle Cell Screening Program** (Screening and diagnosis of hemoglobinopathies)	P.H. Micro. Med. Lab. Tech II Typist III	0.8 1.0 1.0	Pers. 35,884 Supp. 9,668 Equip. 7,727 Other 654 **Total** 53,933
	Federal **Highway Safety Program** (Preparation of Alcohol breath simulator solution used as calibration standard in breathalyzers).	An. Chem II An. Chem I Lab Tech	0.1 0.1 0.1	Supp. 5,312 Equip. 669 Other 270 **Total** 6,251
	Solid Waste Planning Project (EPA) (Chemical analyses on land fill drainage)	An. Chem. I	1.0	Pers. 15,940 **Total** 15,940
	Safe Drinking Water Act (Initial grant subsequent to assuming primacy; used for equipment, supplies and travel)	–	–	Supp. 26,579 Equip. 141,701 Other 3,572 **Total** 171,852

Table 3-3
GRANTS, CONTRACTS, OR SPECIAL SERVICE AGREEMENTS WITH OTHER DEPARTMENTS OR AGENCIES (PRIVATE, FEDERAL, STATE, OR LOCAL) – Continued

Lab	Source of Funds Programs Served & Services Provided	Staff Utilized	FTE	Costs	
N.C. (Cont.)	**OSHA Program – Administered jointly by N.C. Dept. of Labor and Health** (Analytical testing support to field staff investigating OSHA complaints.)	An. Chem. I Lab Tech.	1.0 1.0	Pers. **Total**	26,262 **26,262**
	VD Control Program (Gonorrhea Lab. Advisor provides training/proficiency testing to participating local health depts)	Lab. Improvement Consultant	0.5	Pers. **Total**	9,820 **9,820**
Ohio	**Federal and State** **Occupational Safety & Health** (Industrial Chemistry)	Chemist II Chemist III Lab. Asst. Typist II	1.0 0.2 0.2 0.2	Pers. Supp. Equip. Other **Total**	11,723 1,130 239 1,881 **14,973**
	State **Sickle Cell Grant** (Abnormal hb.)	Lab. Tech.	0.8	Pers. **Total**	11,549 **11,549**
	Federal **Encephalitis Grant** (Virus Isolation)	Vet. I Lab. An. Aid.	1.0 0.5	Pers. Equip. **Total**	27,886 13,388 **41,274**
	Maternal and Child Health (Hereditary-Metabolic)	Chemist I Lab. Asst. Lab. Tech I Typist	1.1 1.0 3.0 1.0	Pers. Supp. **Total**	66,116 8,958 **75,074**
	Genetics Grant (Hypothyroid testing)	Chemist I	0.4	Pers. Supp. **Total**	4,400 11,995 **16,395**
	Interstate Food Service (Food Tests)	Micro I	0.5	Pers. **Total**	5,944 **5,944**
	VD Control (Syphilis & Gonorrhea)	Micro. I Micro. II Lab. Tech I Lab. Technol.	1.0 1.0 3.0 1.5	Pers. **Total**	84,412 **84,412**
	Federal and State **EPA Contract** (Environmental Chemistry)	Chem. I Chem. II Chem. III Lab. Asst. Lab. Technol. Micro. I Micro. I Micro. III Lab. Tech I Lab. Tech II Sec I Typist II Chem. Lab. Sup.	11.7 5.5 2.4 2.6 3.6 0.9 1.0 1.0 0.8 0.6 1.0 2.5 1.0	Pers. Supp. Equip. Other **Total**	497,507 81,442 20,513 17,722 **617,184**
	Industrial Safety & Hygiene (Industrial Chemistry)	Chem. III Lab Asst. Typist II	0.2 0.2 0.2	Pers. Supp. Equip. Other **Total**	30,500 8,892 847 917 **41,156**

Table 3-3
GRANTS, CONTRACTS, OR SPECIAL SERVICE AGREEMENTS WITH OTHER DEPARTMENTS OR AGENCIES (PRIVATE, FEDERAL, STATE, OR LOCAL) – Continued

Lab	Source of Funds Programs Served & Services Provided	Staff Utilized	FTE	Costs	
Okla.	**Local**				
	Comanche County Health Dept. (Misc. Laboratory Services)	Microbiologist	1.0	Pers. Total	10,337 10,337
	Federal				
	Family Planning Program – OSHD (GC Culture and VDRL)	Lab Assistant	2.0	Pers. Total	15,769 15,769
	Immunization Program–OSHD (Influenza Serveillance)	Microbiologist	0.2	Pers. Supp. Total	3,700 3,199 6,899
	Venereal Disease Program–OSHD (GC Culture)	Microbiologist Stock Clerk	2.0 0.5	Pers. Supp. Other Total	32,921 24,865 6,052 63,838
	Water Quality Service – OSHD (Pathogenic Bacteria & Virus in Sewage)	Microbiologist	1.5	Pers. Total	20,995 20,995
	Water Quality Services – OSHD (Coliform Tests for Public Water Supplies)	Microbiologist	1.0	Pers. Total	19,104 19,104
Ore.	**State**				
	Contract with University of Oregon Health Science Center (Medical Consultation)			Other Total	6,000 6,000
	Local				
	Contract with 4 pathologists (Laboratory Improvement Consultation)			Other Total	400 400
	State				
	Maternal Child Health (Neonatal Screening)	–	2.0	Pers. Supp. Total	30,253 2,560 32,813
	Other				
	Contract with other States – Metabolic Disorders (Neonatal Screening)	–	–	Supp. Total	18,381 9,851 28,232
R.I.	**Federal**				
	U.S.P.H.S. Block Grant (Microbiology)	Microbiologists Techs.	4.0 2.0	Pers. Total	100,000 100,000
	EPA – Air Pollution (Chemistry)	Chemist. Techs	3.0 2.0	Pers. Total	77,068 77,068
S.C.	**Federal**				
	Pesticides Contract (Analyses of human, animal and environmental samples for pesticides and herbicides to baseline exposure levels)	Chemist IV Chemist II Chemist I Dir. Div. Hlth. Lab	1.0 1.0 1.0 0.1	Pers. Other Total	44,809 1,652 46,461
	Blood Lead Agreement (Analysis of blood samples for levels of lead content to determine geographic areas of high risk)	Chemist II	0.5	Pers. Supp. Total	6,380 2,440 8,820
	Federal and Local				
	Drug Rehabilitation Program (Analysis of urine specimens for abused drugs)	Chemist III Lab. Spec.	0.9 0.9	Pers. Supp. Total	21,323 2,233 23,556

Table 3-3
GRANTS, CONTRACTS, OR SPECIAL SERVICE AGREEMENTS WITH OTHER DEPARTMENTS OR AGENCIES (PRIVATE, FEDERAL, STATE, OR LOCAL) – Continued

Lab	Source of Funds Programs Served & Services Provided	Staff Utilized	FTE	Costs
S.D.	Federal DEP (Water quality and hygiene testing)	Chemist Microbiologist	2.0 1.0	Costs exceeds federal funds and is supplemented by state monies
	Indian Health Service (Laboratory Services in excess of normal availability)	Microbiologist	0.5	Pers. 5,122 Total 5,122
Texas	Federal Communicable Disease (Diagnostic Microbiology)	Microbiologist Clerical Technician Support	3.0 15.0 5.0 8.0	Pers. 230,230 Supp. 269,412 Total 499,642
	Communicable Disease (Gonorrhea Microbiology)	Microbiologist Clerical Technician Support	2.0 6.0 3.0 6.0	Pers. 141,722 Supp. 24,920 Total 166,642
	Water Hygiene (Safe Drinking Water Act)	Chemist Technician	4.0 5.0	Pers. 113,577 Supp. 124,595 Equip. 303,060 Total 541,232
	State Water Resources (Chemical/Microbiological Analyses)	Chemist Microbiologist Technician Clerical Support	5.0 2.0 5.0 1.0 3.0	Pers. 175,056 Supp. 20,953 Total 196,009
	Health Maintenance (Screening for State Welfare Dept.)	Chemist Technologist Technician Clerical Support	3.0 2.0 8.0 1.0 1.0	Pers. 168,785 Supp. 45,000 Total 213,785
	Veterinary Public Health (Meat Analysis)	Chemist Support	1.0 1.0	Pers. 21,516 Total 21,516
Utah	Federal EPA Laundry Unit (Pesticide retention by cloth)	Chemist	3.0	Pers. 32,458 Supp. 4,125 Other 7,249 Total 43,832
	Vaughn Hansen Associates Water Samples (Gross Alpha-Beta.)	Chemist Technician	<0.1 0.1	Total 823
Va.	Federal LEAA Forensic Science (Drug Screening and Training of Law Enforcement Officers)	Chemist Tech. Clerk	1.0 1.0 1.0	Pers. 40,500 Supp. 5,000 Equip. 66,400 Other 52,000 Total 163,900
W.Va. . . .	State & Federal Medicaid Program (Evaluation and Certification of Participating Laboratories)	Microbiologist Chemist Director Supp. Service	3.0 1.0 0.1 0.1	Pers. 56,755 Supp. 2,660 Equip. 834 Other 6,315 Total 66,564

Table 3-3
GRANTS, CONTRACTS, OR SPECIAL SERVICE AGREEMENTS WITH OTHER DEPARTMENTS OR AGENCIES (PRIVATE, FEDERAL, STATE, OR LOCAL) – Continued

Lab	Source of Funds Programs Served & Services Provided	Staff Utilized	FTE	Costs	
Wisc.	**Private**				
	Becton-Dickinson (Hard Glass Study)	–	–	Supp. Other **Total**	1,452 1,535 **2,987**
	Becton-Dickinson (Serum Separator Evaluation)	–	0.5	Pers. Supp. Other **Total**	10,782 308 190 **11,280**
	Ortho Diagnostic Instruments (BKM Evaluation)	–	1.0	Pers. Supp. Equip. Other **Total**	10,938 6,270 636 183 **17,844**
	Hyland Corporation (Assay Control S ım)	–	0.3	Pers. Supp. **Total**	4,135 13,437 **17,572**
	Federal				
	DHEW – Health Resources Adm. (Training Grant)		0.7	Pers. Supp. **Total**	9,648 9,340 **18,988**
	DHEW – WIS – DHSS (Influenza Surveillance)	–	1.0	Pers. Other **Total**	13,443 1,153 **14,596**
	DHEW, DHS, CDC (Erythrocyte Protoporphyrin Proficiency Testing)	–	1.0	Pers. Supp. Other **Total**	13,055 5,341 944 **19,340**
	State				
	ND Trans, Wisconsin Division of Transportation (CNS Depressants in Wisconsin Traffic Fatalities)	–	1.0	Pers. Supp. Equip. **Total**	16,586 225 16,567 **33,378**
	WIS – DHSS (Cytogenetics Unit)		1.8	Pers. Supp. **Total**	36,206 3,978 **40,184**
Wyo.	**Federal**				
	Medicare (Laboratory Inspection)	Med. Tech.	0.3	Pers. **Total**	7,760 **7,760**
	Highway Safety (Alcohol Testing)	Chemist Clerical	2.0 1.0	Pers. Supp. Equip. Other **Total**	23,343 4,772 3,000 16,185 **47,300**
	Law Enforcement Assistance Adm. (Toxicology)	Chemist	1.0	Pers. **Total**	12,302 **12,302**

Table 3-4
States Reporting Charges for Laboratory Services

Lab	Services Performed	Charge Per Unit	Unit	Estimated Annual Receipts	Disposition of Funds
Ale.	Pin Worm	1.25	Spec.	46,016	General Fund
	Intestinal Parasites	3.58	Spec.		
	Sickle Cell	2.75	Spec.		
Ariz.	Immunology	Various	—	125,000	General Fund
	Clinicel Microbiology	Fees			
	Environmental Health				
Ark.	Premarital Blood Test Certificates	1.00	Test	19,000	Retirement of Leboretory Building Bonds
Colo.	Drugs of Abuse	2.53	Spec.	50,600	Seleries of Staff Plus Supplies
Conn. . . .	Strep. Throat Culture	1.00	Culture	150,000	General Fund
Fle.	Urine Screening for Dangerous Drugs (If Qual. Test for	2.00	Spec.	3,300	Pertiel Funding of Urine Screening Program.
	Alcohol Included)	.50	Spec.		
Ide.	Water Bacteriology	Veries	Test	106,113	Leboratory Budget, Excess Over Estimate Daclared Reverts to General Fund.
	Water Chemistry				
	Mercury, Lead; Tissues,				
	Urine, Blood, Food, etc.	10.00			
	Cholinesterese Enzyme Assey	10.00			
	Urine Drug Screen	5.00			
	Syphilis Serology	4.00			
	Rubelle Serology	4.00			
	Cytogenetic Anelysis	30.00			
	Food Analysis, Salmonelle	8.50			
	Food Anelysis, Coliform	6.00			
Ind.	Privete Watar Bect.	2.50	Semple	28,349	Generel Fund — Excapt for Privete Water Bect. Postage end Handling Fees (Up to ($2.25)
	Public Weter Bact.	10.00	Semple		
	Premeritel Syphilis Sero.	2.50	Spec.		
Ie.	MPH-Potable Weter	3.00	Test	378,400	Generel Operation Budgat
	Membrane Filter Weter	12.00	Test		
	Nitrate + Iron + Herdness	3.00	Test		
	BOD + NH_3 — Effluent	8.00	Test		
	Urine Screen — Abuse Drugs	7.50	Test		
	Trace Metals	10-14.00	Test		
	Other H_2O Quality Parameters	4-48.00	Test		
	Radiation	10-40.00	Test		
	Pesticides	48-104.00	Test		
Kans.	Water Microbiology	2.00	Sample		Generel Fund
	Water Chemistry				
	Partial Chem.	7.50	Semple		
	Complete Chem.	23.00	Semple		
Me.	Water Analysis				
	(Bact. & Chem. Test)	5-20.00	Test	329,321	To Support Activities Not Stete or Federally Fundad — Personnel, Supplies, Equipmant, Trevel, Personel Progrems.
	Serological Screening	4.00	Test		
	Throat Culture	2.00	Test		
	Enteric	6.00	Test		
	Mycology, Parasitology	5-10.00	Test		
	Metabolic Screening	3.00	Test		
	Blood Lead	6.00	Test		
	Chemistry-Toxicology	10.00	Hour		
	Pesticide Analyses	10.00	Hour		
Mass.	Laboratory Certificate	5.00	Cert.	1,550	Generel Fund
Miss.	Medicare-Medicaid			75,000	Generel Laboretory Budget
	Services (Medicaid Rates)				
	Throat Culture for Group A Strep	1.00	Spec.		
	TB Culture	300.00	Monthly		
	Mental Hospital				
Mont. . . .	Water Bacteriology	4.00	Samples	38,750	$28,250 — Water Bacteriology Deposited Generel Fund
	MPN	10.00	or Test		$5,000 — Abused Substences, deposited budget #0570
	Fecal Coliform	6.00			$5,500 — Chemistry Lab., deposited budget #0675
	Six-Dil Plate Count-Water	7.00			
	STD Chemical-Water	15.00			
	EPA-STD Chemicel-Water	70.00			
	Individual Chemicals	2.00			
	Drug Screen — Urine	6.00			
	Alcohol — Blood and Urine	6.00			
	Other Environmental — Chemical Analyses (Air Quality and Water Quality, etc.)	3-60.00			

Table 3-4
States Reporting Charges for Laboratory Services — Continued

Lab	Services Performed	Charge Per Unit	Unit	Estimated Annual Receipts	Disposition of Funds
Nebr.	Water Samples — (Private Bact. & Chem. Tests)	2-15.00	Test	15,000	Placed in Dedicated Fund Appropriated to Laboratory Annually.
	Blood or Breath Alcohol	8.00	Test		
	Drug Screen Tests	5.00	Test		
	Shipping Supplies	1-3.00	Kit		
N.J.	VDRL	2.00	Spec.	319,822	Divisions Revolving Fund
	Rubella Screening	3.00	Spec.		
	Blood Lead, EP & HCT	6.00	Spec.		
	Bact. Exam	6.00	Spec.		
	Potable Water	6.00	Spec.		
N.M.	All Service Performed for Federal Agencies, Contractors, Grantees or State Agencies Outside HSSD are Charged for Services Received Per Relative Value Unit (Adapted from ASTPHLD — CDC Relative Value Structure.)	2.61	Relative Value Unit	130,800	Receipts are Credited to Budgeted Operating Revenue
N.C.	Microbiological Analyses of Public Water Supplies.	(A)	Culture Test	240,000	State Appropriation to Lab. is Reduced by Amount of Estimated Receipts in Effect Becomes Part of Annual Operating Budget.
	Sale of Specimen Collection Containers and Biologicals	Varies with Type			
Ore.	Metabolic Disorders	2.00	Sample	218,860	Data Processing
S.C.	Syphilis Serology	1.00	Spec.	85,000	General Lab. Operating Budget.
	Rh. Determination	2.00	Spec.		
	Rubella Antibody Titer	2.00	Spec.		
	FTA-ABS	3.00	Spec.		
	Infectious Mono. Test	3.00	Spec.		
	Toxoplasmosis Test	3.00	Spec.		
	Drug Analysis (qual)	3.00	Spec.		
	Drug Analysis (quan.)	10.00	Spec.		
S.D.	Environmental	1.00	Test	35,000	Funds Received Under Contract Utilized by Laboratory, All Other Funds Revert to General Fund.
	Chemistry and Microbiology	1.00	Culture		
Utah	Gross Alpha-Beta in Water	15.00	Sample	823	General Fund
	Blood Alcohol	14.65	Sample		
Va.	Special or Additional Lab. Work Not Included in General Budget.	—	—	Varies	General Lab Operating Budget.
Wash. . . .	Chemical Analysis of Water	2-95.00	Test		General Fund
	Water Bacteriology	6.00	Sample		
Wisc.	Clinical Chemistry	3.00	Test	1,040,000	Laboratory Budget
	General Bacteriology	3.00	Test		
	Immunology	3.00	Test		
	Immunohematology	3.00	Test		
	VDRL	3.00	Test		
	Other Immunology				
	Paternity Test	9.00	Test		
	Pre-Natal Screen	7.50	Test		
	TORCH panel	5.00	Test		
	Toxicology	3-7.00	Test		
	Virus (Serology-Isolation)	3.00	Test		
	Rabies	3.00	Test		
	Water Bacteriology	3.00	Kit		

(A) Sliding Scale $15-64/yr depending on gross sales on number of connections.

SECTION IV
WORKLOAD REPORTING CATEGORIES

THE FOLLOWING DEFINITIONS APPLY TO CATEGORIES I THROUGH XII:

Workload is reported by the number of specimens in each category or sub-category. Types of procedures *routinely** used in your laboratory are to be indicated by checking the appropriate box. The Association (ASTPHLD) is interested in the type of procedures routinely followed in your laboratory. Therefore, do not check those procedures that you have the capability of performing but do not do so on a routine basis.

*Definition of *Routine* – Those tests performed as part of your standard operating procedures on a specimen or sample.

Specimen/Sample

Any material received in the lab for testing in a workload category or sub-category or a material which is divided into aliquots for testing in multiple categories or sub-categories is counted as *one specimen for each category or sub-category*. 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 sub-category in which it is tested.

Table 4-1
I. DIAGNOSTIC BACTERIOLOGY
SUMMARY OF SPECIMENS BY CATEGORY AND SUB-CATEGORY

Lab & Region	Total Diagnostic Bacteriology Specimens	A Nasopharyngeal Specimens	B Mycobacterial Specimens	C Enteric Specimens	D Gonococcus Specimens	E Other Bacteriology Specimens
TOTAL	**7,656,446**	**2,146,251**	**526,217**	**224,234**	**4,660,165**	**99,579**
Average	147,239	41,274	10,963	4,312	89,619	2,620
New England	**745,275**	**478,492**	**17,307**	**25,121**	**218,987**	**5,368**
Conn.	263,436	218,914	8,426	8,552	25,415	2,129
Mass.	168,572	97,964	–	10,162	58,707	1,739
Me.	47,242	4,978	3,678	566	37,629	391
N.H.	73,656	50,594	2,486	1,544	19,032	–
R.I.	135,862	68,859	1,137	3,479	61,659	728
Vt.	56,507	37,183	1,580	818	16,545	381
Middle Atlantic	**389,710**	**8,555**	**29,665**	**11,698**	**339,792**	**–**
N.J.	220,680	1,331	19,429	8,767	191,153	–
N.Y.	169,030	7,224	10,236	2,931	148,639	–
Pa.						
East North Central	**1,000,533**	**464,389**	**44,488**	**33,536**	**436,531**	**21,589**
Ill.	237,113	61,469	7,604	8,238	156,734	3,068
Ind.	14,180	9	4,649	2,482	6,054	986
Mich.	359,960	143,759	17,981	13,655	171,618	12,947
Ohio	316,397	222,781	7,805	1,414	80,584	3,813
Wisc.	72,883	36,371	6,449	7,747	21,541	775
West North Central	**537,189**	**215,282**	**32,502**	**26,644**	**253,351**	**9,410**
Ia.	109,648	47,741	3,486	1,113	53,974	3,334
Kans.	81,557	26,645	6,040	5,332	40,571	2,969
Minn.	143,861	3,433	14,752	13,364	112,115	197
Mo.	80,870	59,848	–	2,598	17,406	1,018
Nebr.	28,419	6,652	898	440	19,857	572
N.D.	52,658	42,392	3,772	2,287	4,207	–
S.D.	40,176	28,571	3,554	1,510	5,221	1,320
South Atlantic	**1,900,059**	**199,480**	**163,214**	**46,199**	**1,473,301**	**17,865**
Del.	31,362	886	–	762	29,011	703
D.C.	84,976	11,777	3,274	2,294	67,631	–
Fla.	622,169	38,023	54,275	20,677	503,405	5,789
Ga.	272,180	21,107	26,962	5,452	218,659	–
Md.	418,308	47,835	22,775	7,302	340,396	–
N.C.	21,252	1,293	14,100	3,100	984	1,775
S.C.	224,177	4,590	14,259	698	197,389	7,241
Va.	141,919	43,292	18,450	5,479	72,342	2,356
W.Va.	83,716	30,677	9,119	435	43,484	1
East South Central	**1,021,604**	**223,469**	**102,888**	**16,033**	**666,555**	**12,659**
Ala.	394,669	53,029	44,272	5,053	288,627	3,688
Ky.	26,613	4,963	9,530	992	10,022	1,106
Miss.	231,864	41,264	22,622	5,101	160,458	2,419
Tenn.	368,458	124,213	26,464	4,887	207,448	5,446
West South Central	**1,000,519**	**72,865**	**78,562**	**31,872**	**816,406**	**814**
Ark.	109,287	16,195	20,326	2,177	70,589	–
La.	139,616	22,768	11,814	10,198	94,733	103
Okla.	118,147	21,656	7,799	1,800	86,181	711
Tex.	633,469	12,246	38,623	17,697	564,903	–
Mountain	**662,890**	**403,128**	**24,966**	**12,710**	**211,908**	**10,178**
Ariz.	23,988	3,876	8,151	2,100	8,648	1,213
Colo.	179,460	152,032	2,337	2,707	21,817	567
Ida.	58,310	23,637	1,366	873	30,918	1,516
Mont.	18,749	1,627	3,781	308	12,278	755
Nev.	56,536	383	1,657	453	54,043	–
N.M.	87,489	11,519	5,312	3,096	61,568	5,994
Utah	64,485	39,639	2,007	2,990	19,716	133
Wyo.	173,873	170,415	355	183	2,920	–
Pacific	**362,983**	**77,483**	**30,681**	**19,723**	**213,400**	**21,696**
Alaska	83,806	13,639	9,209	2,723	49,413	8,822
Cal.	35,244	811	2,518	5,746	24,403	1,766
Hawaii	196,599	53,255	9,435	6,960	116,248	10,701
Ore.	14,930	6,432	3,485	1,831	2,775	407
Wash.	32,404	3,346	6,034	2,463	20,561	–
Territories	**35,684**	**3,108**	**1,944**	**698**	**29,934**	–
Guam	3,787	268	1,944	183	1,392	–
P.R.	31,897	2,840	–	515	28,542	–
V.I.						

Table 4-2
I. DIAGNOSTIC BACTERIOLOGY
A. NASOPHARYNGEAL SPECIMENS

Lab & Region	1. Strept., Beta Hemolytic, Group A					
	Number of Specimens	Procedures Used				
		Culture	FA	Sero-grouping	Sero-Typing	Other
TOTAL	**2,028,607**					
Average	39,012					
New England	**476,652**					
Conn.	218,893	X	X	X	–	Bacitracin Disc
Mass.	97,886	X	X	–	–	
Me.	4,816	X	X	X	–	
N.H.	49,436	X	X	–	–	
R.I.	68,787	X	X	–	–	
Vt.	36,834	X	–	X	–	
Middle Atlantic	**1,090**	–				
N.J.	7	–	X	–	–	
N.Y.	1,083	X	X	X	X	
Pa.						
East North Central	**456,717**					
Ill.	59,259	X	–	X	–	
Ind.	9	X	X	X	–	
Mich.	143,425	X	–	–	–	
Ohio	218,050	X	X	X	–	
Wisc.	35,974	X	X	–	–	
West North Central	**184,069**					
Ia.	47,729	X	X	–	–	
Kans.	26,494	X	X	–	–	
Minn.	–	–	–	–	–	
Mo.	59,739	X	X	X	–	
Nebr.	6,615	X	X	X	–	
N.D.	23,132	X	X	X	–	
S.D.	20,360	–	X	–	–	
South Atlantic	**161,456**					
Del.	886	X	X	–	–	
D.C.	7,576	X	–	X	–	8acitracin Disc
Fla.	16,567	X	–	–	X	8acitracin Disc
Ga.	17,279	X	X	X	–	
Md.	47,835	X	–	X	–	8acitrecin Disc
N.C.	1,293	X	–	X	–	
S.C.	4,575	X	X	X	–	
Va.	35,038	X	X	X	–	Biochemical ident.
W.Va.	30,407	X	X	X	–	
East South Central	**223,120**					
Ala.	52,975	X	X	–	–	
KY.	4,953	X	X	X	–	
Miss.	41,258	X	X	–	–	
Tenn.	123,934	–	X	–	–	
West South Central	**47,575**					
Ark.	16,193	X	X	X	X	
La.	7,749	X	X	X		
Okla.	19,386	X	X	–	–	
Tex.	4,247	X	X	X	–	
Mountain	**401,880**					
Ariz.	3,221	X	X	X	X	Biochemicals
Colo.	152,000	X	X	–	–	
Ida.	23,559	X	X	–	–	
Mont.	1,599	X	–	X	–	
Nev.	383	X	–	–	–	
N.M.	11,092	X	X	X	–	
Utah	39,611	X	X	–	–	
Wyo.	170,415	X	X	X	–	
Pacific	**73,160**					
Alaska	12,298	X	X	X	–	Bacitracin Disc
Cal.						
Hawaii	53,225	X	X	–	–	
Ore.	6,140	X	X	–	–	
Wash.	1,497	X	X	–	–	
Territories	**2,888**					
Guam	48	X	–	X	–	
P.R.	2,840	X	X	–	–	
V.I.						

Table 4-3
I. DIAGNOSTIC BACTERIOLOGY
A. NASOPHARYNGEAL SPECIMENS

Lab & Region	2. Diphtheria						
	Number of Specimens	Procedures Used					
		Direct Smear	Culture	Confirm. Sugars	Toxo-genicity	Other
TOTAL	**28,763**					
Average	685					
New England	**64**					
Conn.	21	–	X	X	X	
Mass.	13	X	X	X	X	FA
Me.	–	–	–	–	–	
N.H.	–	–	–	–	–	
R.I.	20	X	X	X	X	
Vt.	10	X	X	X	–	
Middle Atlantic	**6**					
N.J.	2	–	X	–	X	
N.Y.	4	X	X	X	X	
Pa.						
East North Central	**889**					
Ill.	399	–	X	X	X	
Ind.	1	X	X	X	X	
Mich.	4	–	X	X	X	
Ohio	331	–	X	X	X	
Wisc.	154	X	X	X	X	
West North Central	**8,326**					
Ia.	4	X	X	–	X	
Kans.	21	X	X	X	X	
Minn.	30	X	–	X	X	Smear of 18 hr. Culture
Mo.	12	–	X	X	X	
Nebr.	36	X	X	X	–	
N.D.	12	–	X	X	X	
S.D.	8,211	X	X	–	–	
South Atlantic	**16,614**					
Del.	–	–	–	–	–	
D.C.	–	–	–	–	–	
Fla.	16,567	–	X	X	X	
Ga.	18	X	X	–	–	
Md.	3	–	X	X	–	
N.C.	–	–	–	–	–	
S.C.	3	X	X	X	–	
Va.	23	X	X	–	X	
W.Va.	–	–	–	–	–	
East South Central	**64**					
Ala.	54	X	X	–	X	
Ky.	2	–	X	X	X	
Miss.	6	–	X	X	X	
Tenn.	2	X	X	X	X	
West South Central	**118**					
Ark.	2	X	X	X	–	
La.	8	X	X	–	–	
Okla.	3	X	X	X	X	
Tex.	105	–	X	X	X	Colony Type Differentiation
Mountain	**1,098**					
Ariz.	620	X	X	X	X	
Colo.	24	X	X	X	X	
Ida.	14	–	X	–	–	
Mont.	8	X	X	X	X	
Nev.	–	–	–	–	–	
N.M.	427	X	X	X	X	
Utah	5	X	X	X	X	
Wyo.	–	–	–	–	–	
Pacific	**1,584**					
Alaska	487	X	X	X	X	
Cal.	2	X	X	X	X	
Hawaii	17	X	X	X	X	
Ore.	64	X	X	X	X	
Wash.	1,014	X	X	X	X	Sensitivity
Territories						
Guam	–	–	–	–	–	
P.R.	–	–	–	–	–	
V.I.						

Table 4-4
I. DIAGNOSTIC BACTERIOLOGY
A. NASOPHARYNGEAL SPECIMENS

Lab & Region	3. Pertussis			
	Number of Specimens	Culture	FA	Other
TOTAL	1,871			
Average	60			
New England	78			
Conn.	–	–	–	
Mass.	65	X	X	Serological
Me.	1	–	X	
N.H.	–	–	–	
R.I.	2	X	–	
Vt.	10	X	X	
Middle Atlantic	263			
N.J.	–	–	–	
N.Y.	263	X	X	
Pa.				
East North Central	480			
Ill.	32	X	X	Slide Agglutination & Direct FA
Ind.	3	–	X	
Mich.	202	X	X	
Ohio	–	–	–	
Wisc.	243	X	X	
West North Central	114			
Ia.	8	X	X	
Kans.	1	X	X	Biochemicals, Slide Agglutination
Minn.	7	X	–	Biochemistry, Serological
Mo.	97	X	X	
Nebr.	1	X	–	
N.D.	–	–	–	
S.D.	–	–	–	
South Atlantic	60			
Del.	–	–	–	
D.C.	–	–	–	
Fla.	–	–	–	
Ga.	10	X	–	
Md.	27	X	X	
N.C.	–	–	–	
S.C.	12	X	–	Biochemicals
Va.	–	–	–	–
W.Va.	11	–	X	
East South Central	285			
Ala.	–	–	–	
Ky.	8	–	X	
Miss.	–	–	–	
Tenn.	277	X	X	Biochemicals, Agglutinations
West South Central	217			
Ark.	–			
La.	104	–	X	
Okla.	113	X	X	
Tex.	–	–	–	
Mountain	63			
Ariz.	35	X	–	
Colo.	8	X	X	
Ida.	–	–	–	
Mont.	20	X	X	Serological Agglutination
Nev.	–	–	–	
N.M.	–	–	–	
Utah	–	–	–	
Wyo.	–	–	–	
Pacific	310			
Alaska	3	–	X	
Cal.				
Hawaii	13	X	X	
Ore.	143	–	X	
Wash.	151	X	X	
Territories	1			
Guam	1	X	–	
P.R.	–	–	–	
V.I.				

TABLE 4-5
I. DIAGNOSTIC BACTERIOLOGY
A. NASOPHARYNGEAL SPECIMENS

4. Other Nasopharyngeal Specimens

Lab	Number of Specimens	Disease — Procedures Used
Total	**97,374**	
Average	3,358	
Ala.	43	Staphylococcus — Coagulase
Alaska	851	Meningitis — Culture and Serotyping H. influenzae — Culture S. pneumoniae — Culture Staphyloccal Infection — Culture and Coagulase
Cal.	809	Infant Botulism — Culture, Biochemicals, Animal Inoculation
D.C.	4,201	Urinary Tract Infection — Culture Antibiotic Susceptibility — Culture Miscellaneous — Culture
Fla.	4,889	Eye, Ear, Urine, Wounds and Lesions, Other Fluids and Exudates — Culture Dental Caries — Culture and Count
Ga.	3,800	Isolation and/or Identification of any Bacterial Isolate of Probable Clinical Significance — Direct Smears, Culture, Biochemical, Serological.
Ida.	64	Miscellaneous Specimens for Identification
Ill.	1,779	Meningococcus and Other Pathogens — Culture, Biochemicals and Serotyping
La.	14,907	Neisseria Meningitidis — Culture Staphyloccal Diseases — Culture Miscellaneous — Culture
Kans.	129	Nasopharyngitis — Smear, Culture, Biochemicals, Serogrouping, Serotyping
Me.	161	Anaerobes — Thio, Chopped Meat Biochem e.g.l.c. Food Bact. — Recommended CDC
Md.	10,287	Bacteremia — Culture Bacteriuria — Culture Conjunctivitis, Otitis — Culture Wounds, Exudates, Transudates — Culture
Mich.	128	Vincent's Angina — Slide
Minn.	3,386	Referred Culture for Identification — Variety of Human Sources — Smear, Biochemical, Serological, Animal Pathotoxin.
N.H.	1,158	Misc. Specimens for Bacterial Identification — Smear, Culture, Biochemicals.
N.J.	1,322	All Diseases — Conventional Biochemicals
N.Y.	5,874	Variety of Diseases — Misc. Bact. (Various Procedures) Anaerobic Infections — Anaerobic Procedures Staph Infections — Staph Shape Typing
N.D.	19,248	Blood & Urine Antibiotic Susceptibility Misc. & Referred Cultures
Ohio	4,400	Staphylococcus — Culture, Bacteriophage Type
Okla.	2,154	Vincent's Angina — Microscopic Exam. Staphylococcus Diseases — Culture & Biochemical
Ore.	85	Misc. Nasopharyngeal Specimens — Culture for Ident.
R.I.	50	Vincent's Angina — Smear N. Meningitidis — Culture, Biochemical Pneumococci — Culture, Biochemical
Texas	7,894	Staphylococcus — Phage Typing
Utah	23	Throat Isolates — Culture and Biochemicals
Vt.	329	Misc. Infections — Direct Smear, Culture, Biochemicals
Va.	8,231	Meningitis — Serogrouping & Biochemical Pneumococci — Typing H. Influenzae — Serogrouping Staphylococci — Phage Typing, Coagulase
Wash.	684	Anthrax, Botulism, Legionnaires Disease, Meningococci — Purification, Identification by Serology and Biochemicals, Flagella Stains.
W.Va.	259	Staphylococcus Carrier — Isolation/Coagulase
Guam	219	Misc. Infections — Cervical Smear, Wet Mount, Culture, Sputum.

TABLE 4-6
I. DIAGNOSTIC BACTERIOLOGY
B. Mycobacteria Specimens

Lab & Region	Number of Specimens	Procedures Used							
		Direct Smear	Concentrate Smear	Culture	Direct Suscept. # of Drugs	Indirect Suscept. # of Drugs	# of Bio-Chemicals	Species Ident.	Other
Total	**526,217**								
Average	10,963								
New England	**17,307**								
Conn.	8,426	–	X	X	–	12	15	X	
Mass.	–	–	–	–	–	–	–	–	
Me.	3,678	–	X	X	6	6	9	X	Light exposure
N.H.	2,486	X	X	X	–	–	–	–	
R.I.	1,137	–	X	X	–	7	12	X	
Vt.	1,580	–	X	X	6	6	6	X	
Middle Atlantic	**29,665**								
N.J.	19,429	–	X	X	4	4	–	X	
N.Y.	10,236	–	X	–	4-10	4-15	X	X	Guinea Pig Inoculation
Pa.									
East North Central	**44,488**								
Ill.	7,604	–	X	X	–	7	10	X	
Ind.	4,649	–	X	X	3	3	7	X	Secondary Drug Susceptibility
Mich.	17,981	–	X	X	–	9	–	X	
Ohio	7,805	–	X	X	8	8	6	X	Guinea Pig Inoc.
Wisc.	6,449	–	X	X	–	8	13	X	
West North Central	**32,502**								
Ia.	3,486	X	X	X	5	5	14	X	
Kans.	6,040	–	X	X	6	6	14	X	
Minn.	14,752	–	X	X	–	3	15	–	Drug Sensitivities
Mo.	–	–	–	–	–	–	–	–	
Nebr.	898	–	X	X	6	6	10	X	
N.D.	3,772	–	X	X	4	4	13	X	
S.D.	3,554	–	X	X	4	4	4	–	
South Atlantic	**163,214**								
Del.	–	–	–	–	–	–	–	–	
D.C.	3,274	X	X	X	–	7	7	X	
Fla.	54,275	–	X	X	–	7	10	X	
Ga.	26,962	X	X	X	–	4	8	X	
Md.	22,775	X	X	X	9	9	–	X	
N.C.	14,100	–	X	X	4	4	8	X	
S.C.	14,259	–	X	X	6	6	9	X	
Va.	18,450	–	X	X	–	4	10	X	
W.Va.	9,119	–	X	X	6	6	5	X	
East South Central	**102,888**								
Ala.	44,272	–	X	X	9	9	9	X	Serological Typing of "Atypical" Mycobacteria. Animal Inoculation of Spinal Fluid
Ky.	9,530	–	X	X	9	9	9	X	Fluorochrome Smear
Miss.	22,622	–	X	X	–	7	6	X	
Tenn.	26,464	X	X	X	–	6	10	X	
West South Central	**78,562**								
Ark.	20,326	–	X	X	6	6	13	X	Multiple Drug Susceptibilities
La.	11,814	–	X	X	5	5	20	X	
Okla.	7,799	–	X	X	–	4	12	X	
Tex.	38,623	–	X	X	6	6	–	X	
Mountain	**24,966**								
Ariz.	8,151	X	X	X	8	8	8	X	
Colo.	2,337	–	X	X	–	–	–	X	
Ida.	1,366	X	X	X	5	5	5	X	
Mont.	3,781	–	X	X	5	5	13	X	
Nev.	1,657	X	X	X	–	11	4	–	
N.M.	5,312	–	X	X	4	4	6	X	
Utah	2,007	–	X	X	3	6	–	X	
Wyo.	355	–	X	–	–	–	–	–	
Pacific	**30,681**								
Alaska	9,209	X	X	X	–	3	5	X	
Cal.	2,518	–	X	X	5	5-9	10	X	
Hawaii	9,435	X	X	X	–	–	–	X	
Ore.	3,485	X	X	X	–	–	–	X	
Wash.	6,034	–	X	X	5	5	11	X	
Territories	**1,944**								
Guam	1,944	X	–	X	–	–	–	–	
P.R.	–	–	–	–	–	–	–	–	
V.I.									

Table 4-7
I. DIAGNOSTIC BACTERIOLOGY
C. Enteric Specimens

Lab & Region	Number of Specimens	Procedures Used						
		Primary Plating	Enrichment Plating	Bio-Chemicals	FA	Sero-grouping	Sero-Typing	Other
Total	**224,234**							
Average	4,312							
New England	**25,121**							
Conn.	8,552	X	X	X	X	X	X	
Mass.	10,162	X	X	X	–	X	X	Biotyping
Me.	566	X	X	X	–	X	–	
N.H.	1,544	X	X	X	X	X	–	
R.I.	3,479	X	X	X	–	X	–	
Vt.	818	X	X	X	–	X	X	
Middle Atlantic	**11,698**							
N.J.	8,767	X	X	X	X	X	X	
N.Y.	2,931	X	X	X	X	X	–	
Pa.								
East North Central	**33,536**							
Ill.	8,238	X	X	X	–	X	X	Phage Typing of S. typhi
Ind.	2,482	X	X	X	–	X	X	
Mich.	13,655	X	X	X	–	X	X	
Ohio	1,414	X	X	X	–	X	X	
Wisc.	7,747	X	X	X	–	X	–	
West North Central	**26,644**							
Ia.	1,113	X	X	X	X	X	X	
Kans.	5,332	X	X	X	X	X	X	
Minn.	13,364	X	X	X	–	X	X	Micro Phage Typing S. typhi
Mo.	2,598	X	X	X	–	X	X	
Nebr.	440	X	X	X	–	X	–	
N.D.	2,287	X	X	X	–	X	X	
S.D.	1,510	X	X	X	–	X	–	
South Atlantic	**46,199**							
Del	762	X	X	X	–	X	–	
D.C.	2,294	X	X	X	–	X	X	
Fla.	20,677	X	X	X	–	X	X	
Ga.	5,452	X	X	X	–	X	X	Phage Typing of S. typhi
Md.	7,302	X	X	X	–	X	X	Sensitivities
N.C.	3,100	X	X	X	–	X	X	
S.C.	698	X	X	X	–	X	X	
Va.	5,479	X	X	X	–	X	X	Species indent.
W.Va.	435	X	X	X	–	X	X	
East South Central	**16,033**							
Ala.	5,053	X	X	X	–	X	X	Poly "O" Poly "H"
Ky.	992	X	X	X	–	X	X	
Miss.	5,101	X	X	X	X	X	X	Subculture
Tenn.	4,887	X	X	X	–	X	X	
West South Central	**31,872**							
Ark.	2,177	X	X	X	–	X	X	
La.	10,198	X	X	X	–	–	X	
Okla.	1,800	X	X	X	–	X	X	
Tex.	17,697	X	X	X	–	X	X	
Mountain	**12,710**							
Ariz.	2,100	X	X	X	X	X	X	
Colo.	2,707	X	X	X	–	X	X	
Ida.	873	X	X	X	–	X	X	
Mont.	308	X	X	X	–	X	–	
Nev.	453	X	X	X	–	X	–	
N.M.	3,096	X	X	X	–	X	X	
Utah	2,990	X	X	X	–	X	X	Antibiograms
Wyo.	183	X	X	X	–	X	–	
Pacific	**19,723**							
Alaska	2,723	X	X	X	X	X	–	
Cal.	5,746	X	X	X	X	X	X	Phage Typing of S. typhi, Sensitivity Test
Hawaii	6,960	X	X	X	–	X	X	Salmonella Phage Typing
Ore.	1,831	X	X	X	X	X	X	
Wash.	2,463	X	X	X	–	X	X	
Territories	**698**							
Guam	183	X	X	X	–	X	–	
P.R.	515	X	X	X	X	X	X	
V.I.								

Table 4-8
I. DIAGNOSTIC BACTERIOLOGY
D. Gonococcus Specimens

Lab & Region	Number of Specimens	Procedures Used					
		Smear	Culture	Oxidase Reaction	FA	Bio-Chemical	Other
Total	**4,660,165**						
Avaraga	89,619						
New England	**218,987**						
Conn.	25,415	X	X	X	X	X	Bata-Lactamasa, Trichomonas, Candida
Mass.	58,707	X	X	X	X	X	Beta-Lactamase if Panicillin resistant
Me.	37,629	X	X	X	X	X	
N.H.	19,032	X	X	X	X	X	
R.I.	61,659	X	X	X	X	X	
Vt.	16,545	X	X	X	–	X	
Middle Atlantic	**339,792**						
N.J.	191,153	X	X	X	–	X	
N.Y.	148,639	X	X	X	X	X	
Pa.							
East North Central	**436,531**						
Ill.	156,734	X	X	X	X	X	
Ind.	6,054	X	X	X	X	X	
Mich.	171,618	X	X	X	–	X	
Ohio	80,584	X	X	X	X	X	
Wisc.	21,541	–	X	X	–	–	
West North Central	**253,351**						
Ia.	53,974	X	X	X	X	X	
Kans.	40,571	X	X	X	X	X	Beta-Lactamase, Sensitivity Test
Minn.	112,115	X	X	X	X	X	
Mo.	17,406	X	X	X	X	X	Carbohydrate, Bata-Lactamasa, Sansitivity
Nabr.	19,857	X	X	X	X	X	
N.D.	4,207	–	X	X	–	X	
S.D.	5,221	X	X	X	X	–	
South Atlantic	**1,473,301**						
Dal.	29,011	X	X	X	X	X	
D.C.	67,631	X	X	X	X	X	
Fla.	503,405	X	X	X	–	X	
Ga.	218,659	X	X	X	X	X	
Md.	340,396	X	X	X	X	X	
N.C.	984	X	X	X	–	X	
S.C.	197,389	X	X	X	X	X	
Va.	72,342	X	X	X	X	X	Diract Smaar/malas, PPNG
W.Va.	43,484	X	X	X	X	X	
East South Central	**666,555**						
Ala.	288,627	X	X	X	X	X	PPNG
Ky.	10,022	X	X	X	X	X	Panicillinasa
Miss.	160,458	X	X	X	–	X	
Tenn.	207,448	X	X	X	X	–	
West South Central	**816,406**						
Ark.	70,589	X	X	X	X	X	
La.	94,733	X	X	X	X	X	Bata-Lactamasa
Okla.	86,181	X	X	X	X	X	Bata-Lactamasa
Tax.	564,903	X	X	X	X	X	
Mountain	**211,908**						
Ariz.	8,648	X	X	X	X	X	
Colo.	21,817	X	X	X	–	X	
Ida.	30,918	X	X	X	X	X	
Mont.	12,278	X	X	X	–	X	
Nev.	54,043	X	X	X	–	X	
N.M.	61,568	X	X	X	X	X	
Utah	19,716	X	X	X	X	X	Penicillinase
Wyo.	2,920	X	X	X	X	–	
Pacific	**213,400**						
Alaska	49,413	X	X	X	X	X	
Cal.	24,403	X	X	X	X	X	
Hawaii	116,248	X	X	X	X	X	PPNG
Ora.	2,775	X	X	X	–	X	
Wash.	20,561	X	X	X	X	X	
Territories	**29,934**						
Guam	1,392	X	X	X	–	X	
P.R.	28,542	X	X	X	X	X	
V.I.							

Table 4-9
I. DIAGNOSTIC BACTERIOLOGY
E. Other Bacteriology Specimens

Lab	Number of Specimens	Disease – Procedures Used
Total	**99,579**	
Average	2,620	
Ala.	3,688	Pathogenic *E. coli* – FA Staphylococcus – Culture General Bacteriology – Culture
Alaska	8,822	Urinary Tract Infection – Culture and Plate Count Ear – Eye Infection – Culture Wound, Lesion and Body Fluid – Culture Blood – Spinal Fluid – Culture Skin Infection – Culture Antibiotic Susceptibility – Culture Anaerobic Infection – Culture
Ariz.	1,213	Anaerobic Bacteria – Culture, Isol., Biopsy, I.D. Miscellaneous Bacteria – Culture, Isol., Biopsy, I.D.
Cal.	1,766	Plague – Culture, Animal Inoc, Bacteriophage Relapsing Fever – Stained Smear, Animal Inoculation Anaerobic and Aerobic Infections
Colo.	567	Various – Culture, Biochemicals, Serological
Conn.	2,129	Wound Cultures, Body Fluids, Culture for Classification, Misc. Clinical Material – Primary Plating and Whatever Procedures are Required for Identification. Staphylococcus Referred culture for Phage Typing Vincent's Infection – Smears.
Del.	703	Abnormal Organism(s) – Primary Plating, Enrichment Plating, Biochemicals
Fla.	5,789	Referred Cultures – Culture Identification Referred Cultures(Anaerobes) – Culture Identification Sensitivitity Testing(Throat, etc) – Culture Identification and Drug Sensitivity Rheumatic Fever Prophylaxis Sensitivity (Urine)
Hawaii	10,701	Non–human Enterics – Culture – ID Staphylococcus – Culture – ID Staphylococcus – Phage Typing Leptospirosis – Culture – ID Antibiotic Sensitivity
Ida.	1,516	Anaerobic Culture and Miscellaneous
Ill.	3,068	Staphylococcus Outbreak – Phage Typing Syphilis – Stained Smear Anaerobic and Misc. – Culture, Biochemicals, Gas Chromatography Infections – Animal Inoc.
Ind.	986	Cultures Submitted by Other Laboratories for Identification or Confirmation: Aerobic and Anaerobic.
Ia.	3,334	Misc. Wounds, Fluids, Reference Culture, etc. – Direct Plating, Biochemicals, Serotyping, Serogrouping, FA.
Kans.	2,969	Staphylococcus Infection – Culture, Coagulase, Phage Typing Vincent's Angina – Smear Anaerobic Infection – Culture, Biochemicals, Gas Chromatography Meningitis, Bacterial, Pheumonias, Blood Culture – Smear, Culture, Biochemicals, Serogrouping, Serotyping and When Requested Antibiotic Sensitivities. Misc Infection as Requested.

Table 4-9
I. DIAGNOSTIC BACTERIOLOGY
E. Other Bacteriology Specimens — Continued

Lab	Number of Specimens	Disease — Procedures Used
Ky.	1,106	Anaerobes — Smear, Biochemicals, GLC Staph. Bacteriophage — Smear, Coagulase, Phage Typing Miscellaneous Culture — Smear, Biochemicals, Coagulase, Serogrouping
La.	103	Plague — Guinea Pig Inoculation
Me.	391	Gram Neg. Non-fermenters — Biochemical Haemophilus Influenzae — Biochemical, Morphology, X, Y Factors Meningococcus — Biochemical, — Serotyping Non-Throat Streptococci — Biochemical, Typing
Mass.	1,739	Bacteremia, Bacterial Infection, Meningitis, Nosocomial Infection — Smear, Culture, Biochemical, Serogrouping Serotyping, Biotyping as Appropriate Anaerobic Infections — Culture Biochemicals, GLC Botulism — Culture, Toxin Test
Mich.	12,947	Staphylococcal — Isolates, Phage Typing Salmonella — Isolates, Serotyping Miscellaneous — Culture Identification Miscellaneous — Transudates + Exudates — Isolation + Identification
Minn.	197	Leptospirosis — Culture Botulism — Culture, Toxin Test Vincent's Angina — Smear Blood, Spinal Fluids, Tissues, etc. — Aerobic and Anaerobic Cultures Food Poisoning (Bacterial) — Culture, Toxin Text
Miss.	2,419	Water for Salmonella — Same as Enteric Except FA Blood Culture — Culture, Plating, Biochemicals Urine Culture — Plating, Subculture, Biochemicals, Bacterial Sensitivity Testing Spinal Fluid — Plating, Biochemicals, Gram Stain, Agglutination Miscellaneous Culture — Plating, Selective Subculture, Biochemicals
Mo.	1,018	Misc. Aerobes — Microscopic, Culture Misc. Anaerobes — Biochemical, Animal, Smear Leptospirosis — Serological
Mont.	775	Reference diagnostic Services are Available for Most Bacterial Diseases, Cultures are Processed as Appropriate for each agent.
Nebr.	572	Miscellaneous/Referred Cultures Procedures Used as Appropriate.
N.M.	5,994	Pertussis — Direct FA Plague — Direct FA Staphylococcus Infections — Culture (Phage Typing as Indicated) Nosocomial Infections — Sterility Spore Test (Monitoring — Prevention)
N.C.	1,775	Anaerobic — Smear, Culture, Biochemicals, GLC Reference Culture + Clinical Specimens (All Types) Other than Fecal and Throat Swabs for Strep. — Smear, Culture Biochemicals, Serotyping.
Ohio	3,813	Mycoplasmosis — Culture Leptospirosis — Culture Miscellaneous — Culture Identification and Referred Cultures
Okla.	711	Urinary Tract Infection — Culture Bacteremia — Culture + Serology Meningitis — Culture + Serology Wounds — Culture + Serology Unknown — Culture + Serology
Ore.	407	Miscellaneous Specimens for Culture and Identification
R.I.	728	Miscellaneous — Culture, Biochemicals.
S.C.	7,241	Diseases Caused by Miscellaneous Gram Positive and Gram Negative Organisms — FA, Flagellar and Spore Stains, Biochemicals, GLC, Serological Tests, Antibiograms.

Table 4-9
I. DIAGNOSTIC BACTERIOLOGY
E. Other Bacteriology Specimens — Continued

Lab	Number of Specimens	Disease — Procedures Used
S.D.	1,320	Septicemia — Culture Wounds — Biochemical Ears + Eyes — Suceptibitities Reference Cultures
Tenn.	5,446	Anaerobic Organisms — a. Primary Plating Clinical Culture b. Subculture c. Biochemical Confirmation d. Gas Chromatography e. Toxin Analysis Reference Microbiology a. Aerobic Organisms (1) Subculture (2) Biochemical Confirmation (3) Serogrouping, as Appropriate (4) Serotyping, as Appropriate b. Anaerobic Microbiology (1) Subculture (2) Biochemical Confirmation (3) Gas Chromatography (4) Toxin Analysis
Utah	133	Miscellaneous/Referred Cultures for Identification and/or Confirmation. — Culture and Biochemicals
Vt.	381	Reference Cultures from Hospitals — Smear, Culture, Sugars, Biochemicals.
Va.	2,356	Autopsy and Anaerobic Specimens — Wounds, Urine, Blood and Other Miscellaneous Cultures.
W.Va.	1	Leptospirosis — Darkfield/Culture
Wisc.	775	Anaerobic Infection — VPI Method

Table 4-10
II. MYCOLOGY

Lab & Region	Number of Specimens	Procedures Used						
		Micro. Wet Mounts	Micro. Stains	Culture	FA	Bio-Chemicals	Animal Inoculation	Other
Total	**54,579**							
Average	1,114							
New England	**2,830**							
Conn.	1,886	X	X	X	–	X	X	
Mass.	425	X	X	X	–	X	–	
Me.	240	X	X	X*	–	X	–	
N.H.	60	X	X	X	–	X	–	
R.I.	36	X	X	X	–	X	–	
Vt.	183	X	X	X	–	X	–	
Middle Atlantic	**4,286**							
N.J.	917	X	X	X	–	X	–	
N.Y.	3,369	X	X	X	X	X	X	Slide Culture, Nutritional Study
Pa.								
East North Central	**9,217**							
Ill.	1,176	X	X	X	–	X	X	
Ind.	1,341	X	X	X	–	X	–	
Mich.	2,310	X	X	X	–	X	X	
Ohio	1,227	X	X	X	–	X	X	
Wisc.	3,163	X	X	X	–	X	–	
West North Central	**6,142**							
Ia.	864	X	X	X	X	X	X	
Kans.	623	X	X	X	–	X	X	
Minn.	3,620	X	X	X	–	X	X	Assimilation Test
Mo.	414	X	X	X	–	X	X	Carbohydrate
Nebr.	16	X	X	X	–	X	–	
N.D.	512	X	X	X	–	X	–	
S.D.	93	–	X	X	–	–	–	
South Atlantic	**10,555**							
Del.	19	X	X	X	–	X	–	
D.C.	–	–	–	–	–	–	–	
Fla.	3,080	X	X	X	–	X	–	
Ga.	401	X	X	X	–	X	X	
Md.	2,506	X	X	X	–	X	–	
N.C.	1,527	X	X	X	–	X	–	
S.C.	1,697	X	X	X	X	X	X	Lysozyme Test, Sensitivities
Va.	918	X	X	X	–	X	X	
W.Va.	407	X	X	X	–	X	X	
East South Central	**6,916**							
Ala.	3,371	X	X	X	–	X	–	
Ky.	263	X	X	X	–	X	X	
Miss.	1,990	X	X	X	–	X	–	Hair Culture
Tenn.	1,292	X	X	X	–	X	X	
West South Central	**8,077**							
Ark.	1,586	X	X	X	X	X	–	
La.	1,734	X	X	X	–	X	X	
Okla.	452	X	X	X	–	X	X	
Tex.	4,305	X	X	X	X	X	X	
Mountain	**3,766**							
Ariz.	1,442	X	X	X	–	X	X	In-Vitro Conversion
Colo.	225	X	X	X	–	–	–	
Ida.	986	X	X	X	–	X	–	
Mont.	181	X	X	X	–	X	–	
Nev.	60	X	–	X	–	X	–	
N.M.	677	X	X	X	–	X	X	
Utah	195	X	X	X	–	X	X	
Wyo.	–	–	–	–	–	–	–	
Pacific	**2,584**							
Alaska	198	X	X	X	–	X	–	
Cal.	549	X	–	X	X	X	X	
Hawaii	875	X	X	X	–	X	–	
Ore.	449	X	X	X	–	X	X	
Wash.	513	X	X	X	–	X	–	Tease Mounts
Territories	**206**							
Guam	–	–	–	–	–	–	–	
P.R.	206	X	X	X	–	X	X	
V.I.								

Table 4-11
III. PARASITOLOGY
Summary of Specimens by Category and Sub-category

Lab & Region	Total Parasitology Specimens	A Intestinal Specimens	B Other Specimens
Total	**352,963**	**346,670**	**6,293**
Average	6,788	6,667	175
New England	**16,289**	**16,088**	**201**
Conn.	12,624	12,499	125
Mass.	19	6	13
Me.	56	56	—
N.H.	791	787	4
R.I.	1,677	1,675	2
Vt.	1,122	1,065	57
Middle Atlantic	**4,157**	**4,088**	**69**
N.J.	3,310	3,281	29
N.Y.	847	807	40
Pa.			
East North Central	**15,116**	**14,523**	**593**
Ill.	1,221	1,195	26
Ind.	3,145	2,628	517
Mich.	3,438	3,433	5
Ohio	1,712	1,710	2
Wisc.	5,600	5,557	43
West North Central	**23,043**	**22,514**	**529**
Ia.	1,544	1,512	32
Kans.	6,455	6,435	20
Minn.	11,875	11,476	399
Mo.	1,324	1,247	77
Nebr.	345	344	1
N.D.	1,020	1,020	—
S.D.	480	480	—
South Atlantic	**141,626**	**141,410**	**216**
Del.	243	243	—
D.C.	146	146	—
Fla.	66,508	66,485	23
Ga.	21,457	21,450	7
Md.	8,727	8,719	8
N.C.	5,354	5,327	27
S.C.	22,310	22,174	136
Va.	14,724	14,723	1
W.Va.	2,157	2,143	14
East South Central	**73,908**	**73,882**	**26**
Ala.	51,202	51,194	8
Ky.	3,440	3,440	—
Miss.	11,933	11,926	7
Tenn.	7,333	7,322	11
West South Central	**49,155**	**44,822**	**4,333**
Ark.	1,964	1,562	402
La.	31,055	31,054	1
Okla.	3,423	2,232	1,191
Tex.	12,713	9,974	2,739
Mountain	**7,707**	**7,691**	**16**
Ariz.	249	244	5
Colo.	2,157	2,157	—
Ida.	438	427	11
Mont.	461	461	—
Nev.	159	159	—
N.M.	964	964	—
Utah	3,151	3,151	—
Wyo.	128	128	—
Pacific	**12,131**	**11,821**	**310**
Alaska	1,525	1,519	6
Cal.	2,014	1,947	67
Hawaii	4,229	4,229	—
Ore.	1,009	1,009	—
Wash.	3,354	3,117	237
Territories	**9,831**	**9,831**	**—**
Guam	1,112	1,112	—
P.R.	8,719	8,719	—
V.I.			

Table 4-12
III. PARASITOLOGY
A. Intestinal Specimens

Lab & Region	Number of Specimens	Procedures Used				
		Gross	Direct (incl. Pinworms)	Concentrate Smear	Stained Smear	Other
Total	**346,670**					
Average	6,667					
New England	**16,088**					
Conn.	12,499	X	X	X	X	
Mass.	6	X	–	X	X	
Me.	56	X	X	X	X	
N.H.	787	X	X	X	X	
R.I.	1,675	X	X	X	–	
Vt.	1,065	–	X	X	X	
Middle Atlantic	**4,088**					
N.J.	3,281	–	X	X	X	
N.Y.	807	–	X	–	–	
Pa.						
East North Central	**14,523**					
Ill.	1,195	X	X	X	X	Culture
Ind.	2,628	X	X	X	X	
Mich.	3,433	X	X	X	X	
Ohio	1,710	X	X	X	–	
Wisc.	5,557	X	X	X	–	
West North Central	**22,514**					
Ia.	1,512	X	X	X	X	
Kans.	6,435	X	X	X	X	
Minn.	11,476	X	X	X	X	
Mo.	1,247	X	X	X	X	
Nebr.	344	X	X	X	X	
N.D.	1,020	X	X	X	X	
S.D.	480	X	X	–	–	
South Atlantic	**141,410**					
Del.	243	–	X	X	X	
D.C.	146	X	X	X	X	
Fla.	66,485	X	X	X	X	
Ga.	21,450	–	X	X	X	
Md.	8,719	X	X	X	X	
N.C.	5,327	X	X	X	–	
S.C.	22,174	X	X	X	X	Adult Worms/Proglottids Ident. Egg Count
Va.	14,723	X	X	X	X	PVA
W.Va.	2,143	X	X	X	X	
East South Central	**73,882**					
Ala.	51,194	X	X	X	X	Salt Flotation
Ky.	3,440	X	X	X	X	
Miss.	11,926	–	X	X	X	
Tenn.	7,322	X	X	X	X	
West South Central	**44,822**					
Ark.	1,562	X	X	X	X	
La.	31,054	X	X	X	X	
Okla.	2,232	X	X	X	X	
Tex.	9,974	X	X	X	X	
Mountain	**7,691**					
Ariz.	244	–	X	X	X	
Colo.	2,157	X	–	X	X	
Ida.	427	X	X	X	X	
Mont.	461	–	X	X	X	Identification of Worms
Nev.	159	X	X	X	–	
N.M.	964	X	X	X	X	
Utah	3,151	X	X	X	X	
Wyo.	128	–	X	X	X	
Pacific	**11,821**					
Alaska	1,519	–	X	X	–	
Cal.	1,947	X	X	X	X	
Hawaii	4,229	X	X	X	X	
Ore.	1,009	X	X	X	X	
Wash.	3,117	X	X	X	X	
Territories	**9,831**					
Guam	1,112	–	X	–	–	Amoebiasis (Kato Method)
P.R.	8,719	–	–	X	–	
V.I.						

Table 4-13
III. PARASITOLOGY
B. Other Parasitology Specimens

Lab & Region	Number of Specimens	Types of Specimens				
		Malaria	Trichinosis	Toxoplasmosis	Other Blood Parasites	Other (Disease Entity-Procedures Used)
Total	**6,293**					
Average	175					
New England	**201**					
Conn.	125	X	X	–	–	Misc. Specimens
Mass.	13	X	–	–	–	Babesia, Spider, Maggot, Leech, Caterpiller, Antifact
Me.	–	–	–	–	–	
N.H.	4	X	–	–	–	
R.I.	2	X	–	–	–	
Vt.	57	X	X	X	–	
Middle Atlantic	**69**					
N.J.	29	X	–	–	–	
N.Y.	40	X	X	X	X	Babesia, Ectoparasites
Pa.						
East North Central	**593**					
Ill.	26	X	–	–	X	Whole Worm, Larvae –
Ind.	517	X	X	X	–	
Mich.	5	X	–	–	–	
Ohio	2	–	X	–	–	
Wisc.	43	X	–	–	–	Filariasis, Ectoparasites
West North Central	**529**					
Ia.	32	X				
Kans.	20	X	–	–	–	Scabies
Minn.	399	X	–	–	–	Pinworm Slide Tape, Worm or Insect Ident.
Mo.	77	X	–	–	–	
Nebr.	1	X	–	–	–	
N.D.	–	–	–	–	–	
S.D.	–	–	–	–	–	
South Atlantic	**216**					
Del.	–	–	–	–	–	
D.C.	–	–	–	–	–	
Fla.	23	X	–	–	–	
Ga.	7	X	–	–	–	
Md.	8	X	–	–	–	
N.C.	27	X	–	–	–	
S.C.	136	–	–	–	–	Trichomonas
Va.	1	X	–	–	–	
W.Va.	14	–	–	–	–	Arthropod & Worm (Larva) Ident.
East South Central	**26**					
Ala.	8	X	–	–	–	
Ky.	–	–	–	–	–	
Miss.	7	X	–	–	–	
Tenn.	11	X	–	–	–	
West South Central	**4,333**					
Ark.	402	X	X	X	–	
La.	1	X	–	–	–	
Okla.	1,191	X	–	–	–	Arthropod Ident. & Vaginal Smear
Tex.	2,739	X	–	X	–	
Mountain	**16**					
Ariz.	5	X	–	–	–	
Colo.	–	–	–	–	–	
Ida.	11	–	–	–	–	External
Mont.	–	–	–	–	–	
Nev.	–	–	–	–	–	
N.M.	–	–	–	–	–	
Utah	–	–	–	–	–	
Wyo.	–	–	–	–	–	
Pacific	**310**					
Alaska	6	–	–	–	–	Ectoparasites
Cal.	67	X	–	X	–	Tissue Parasites
Hawaii	–	–	–	–	–	
Ore.	–	–	–	–	–	
Wash.	237	X	X	–	–	
Territories						
Guam	–	–	–	–	–	
P.R.	–	–	–	–	–	
V.I.						

Table 4-14
IV. VIROLOGY
Summary of Specimens by Category and Sub-category

Lab & Region	Total Virology Specimens	A Rabies Specimens	B Viral Isolations	C Rickettsial Ident. Isolations	D Other
Total	**244,787**	**66,467**	**108,052**	**10,077**	**60,191**
Average	4,800	1,329	2,771	916	6,688
New England	**17,915**	**2,165**	**15,716**	**27**	**7**
Conn.	11,660	676	10,984	–	–
Mass.	4,398	703	3,661	27	7
Me.	902	246	656	–	–
N.H.	286	286	–	–	–
R.I.	112	112	–	–	–
Vt.	557	142	415	–	–
Middle Atlantic	**78,356**	**5,085**	**20,193**	**35**	**53,043**
N.J.	63,373	2,452	7,843	35	53,043
N.Y.	14,983	2,633	12,350	–	–
Pa.					
East North Central	**32,088**	**11,618**	**20,274**	**196**	**–**
Ill.	6,295	2,725	3,570	–	–
Ind.	3,203	2,663	540	–	–
Mich.	3,241	970	2,271	–	–
Ohio	13,097	3,025	9,876	196	–
Wisc.	6,252	2,235	4,017	–	–
West North Central	**15,971**	**6,235**	**9,736**	**–**	**–**
Ia.	2,821	786	2,035	–	–
Kans.	2,426	1,602	824	–	–
Minn.	6,663	1,210	5,453	–	–
Mo.	2,904	1,480	1,424	–	–
Nebr.	644	644	–	–	–
N.D.	439	439	–	–	–
S.D.	74	74	–	–	–
South Atlantic	**33,741**	**12,959**	**12,331**	**5,951**	**2,500**
Del.	3,566	718	355	–	2,493
D.C.	55	55	–	–	–
Fla.	5,569	4,186	1,383	–	–
Ga.	3,829	1,927	1,902	–	–
Md.	6,334	2,746	3,581	–	7
N.C.	5,917	1,269	3,201	1,447	–
S.C.	6,343	731	1,108	4,504	–
Va.	1,370	741	629	–	–
W.Va.	758	586	172	–	–
East South Central	**11,160**	**5,706**	**4,603**	**7**	**844**
Ala.	3,562	1,906	805	7	844
Ky.	1,916	1,452	464	–	–
Miss.	3,066	727	2,339	–	–
Tenn.	2,616	1,621	995	–	–
West South Central	**31,170**	**16,036**	**8,263**	**3,246**	**3,625**
Ark.	1,850	1,835	–	15	
La.	2,181	2,181	–	–	–
Okla.	4,832	3,058	1,774	–	–
Tex.	22,307	8,962	6,489	3,231	3,625
Mountain	**9,226**	**4,130**	**5,088**	**2**	**6**
Ariz.	4,399	1,747	2,652	–	–
Colo.	621	621	–	–	–
Ida.	287	113	174	–	–
Mont.	341	–	341	–	–
Nev.	–	–	–	–	–
N.M.	1,264	830	432	2	–
Utah	1,840	345	1,489	–	6
Wyo.	474	474	–	–	–
Pacific	**14,832**	**2,221**	**11,848**	**613**	**150**
Alaska	1,947	279	1,518	–	150
Cal.	6,724	985	5,143	596	–
Hawaii	2,394	5	2,389	–	–
Ore.	2,715	477	2,238	–	–
Wash.	1,052	475	560	17	–
Territories	**328**	**312**	**–**	**–**	**16**
Guam	42	26	–	–	16
P.R.	286	286	–	–	–
V.I.					

TABLE 4-15
IV. VIROLOGY
A. Rabies Specimens

Lab & Region	Number of Specimens	Procedures Used			
		Stained Smear	FRA	Animal Inoculation	Other
Total	**66,467**				
Average	1,329				
New England	**2,165**				
Conn.	676	–	X	X	
Mass.	703	–	X	X	
Me.	246	–	X	X	
N.H.	286	X	X	X	
R.I.	112	–	X	X	
Vt.	142	–	X	X	
Middle Atlantic	**5,085**				
N.J.	2,452	–	X	X	
N.Y.	2,633	–	X	X	
Pa.					
East North Central	**11,618**				
Ill.	2,725	–	X	–	
Ind.	2,663	X	X	–	
Mich.	970	–	X	X	
Ohio	3,025	X	X	X	
Wisc.	2,235	–	X	X	
West North Central	**6,235**				
Ia.	786	–	X	X	
Kans.	1,602	–	X	X	
Minn.	1,210	–	X	X	
Mo.	1,480	X	X	X	
Nebr.	644	–	X	–	
N.D.	439	X	X	–	Referred Smears
S.D.	74	–	X	–	
South Atlantic	**12,959**				
Del.	718	X	X	–	
D.C.	55	–	X	–	
Fla.	4,186	X	X	–	
Ga.	1,927	–	X	X	
Md.	2,746	X	X	X	
N.C.	1,269	–	X	X	
S.C.	731	–	X	X	
Va.	741	X	X	X	
W.Va.	586	X	X	X	
East South Central	**5,706**				
Ala.	1,906	X	X	X	
Ky.	1,452	X	X	X	
Miss	727	X	X	–	
Tenn.	1,621	X	X	X	
West South Central	**16,036**				
Ark.	1,835	X	X	–	
La.	2,181	X	X	X	
Okla.	3,058	–	X	X	
Tex.	8,962	–	X	X	
Mountain	**4,130**				
Ariz.	1,747	–	X	–	
Colo.	621	–	X	X	
Ida.	113	–	X	–	
Mont.	–	–	–	–	
Nev.	–	–	–	–	
N.M.	830	–	X	X	
Utah	345	X	X	X	
Wyo.	474	–	X	–	
Pacific	**2,221**				
Alaska	279	–	X	X	
Cal.	985	–	X	X	
Hawaii	5	X	X	–	
Ore.	477	X	X	–	
Wash.	475	–	X	X	
Territories	**312**				
Guam	26	–	X	–	
P.R.	286	–	X	X	
V.I.					

Table 4-16
IV. VIROLOGY
B. Viral Isolation Specimens

Lab	Number of Specimens	Types of Specimens						Procedures Used									
		Enteric	Arbovirus Human Origin	Arbovirus Non-Human Orig.	Respiratory	Exanthem	Other	Tissue Culture Hosts	Eggs	Animal Hosts	HI/HA	CF	Neutralization Tests	FA—Orig. Spec.	FA—Other	HAdI/HAd	Other
TOTAL	**108,052**																
Average	2,771																
Ala.	805	X	X	X	X	–		X	X	X	X	–	X	–	–	X	
Alaska	1,518	X	X	–	X	X	Herpes II Salmonid IHNV Study	X	X	X	X	X	X	X	–	X	
Ariz.	2,652	X	X	–	X	X	Misc., CNS	X	X	–	–	–	X	–	–	–	
Cal.	5,143	X	–	X	X	X	Birds, Ticks, insects, Virus Isolates, Body Tissue & Fluids.	X	X	X	X	X	X	X	X	X	Electron Microscopy
Conn.	10,984	X	X	–	X	X	Cytomegalovirus CNS Specimens	X	X	X	X	X	X	–	X	X	
Del.	355	X	X	–	X	X		X	X	X	X	X	X	X	X	X	
Fla.	1,383	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
Ga.	1,902	X	X	X	X	X	CMV	X	X	X	X	X	X	–	–	X	IEM, Passive HI
Hawaii	2,389	X	–	–	X	X		X	X	–	X	X	X	X	–	X	
Ida.	174	–	–	–	X	X	Colorado Tick Fever	X	X	–	X	X	–	X	X	–	
Ill.	3,570	X	–	X	X	X		X	X	X	X	X	X	–	–	X	
Ind.	540	X	X	–	X	X		X	–	–	X	X	X	–	–	–	
Ia.	2,035	X	X	X	X	–	Blood, SF Tissue	X	X	X	X	–	X	–	–	–	
Kans.	824	X	X	X	X	X	CMV	X	X	X	X	X	X	–	–	X	
Ky.	464	X	X	–	X	X	Autopsy Materiel	X	X	–	X	X	X	–	–	X	
Me.	656	X	–	–	X	X		X	X	–	X	–	–	–	X	–	
Md.	3,581	X	X	X	X	X		X	X	X	X	X	X	X	X	X	Electron Microscopy RIA – Hepatitis
Mass.	3,661	X	X	X	X	X	Body Tissue & Fluids Proficiency Specimens	X	X	–	X	X	X	–	X	X	Interference Hemolysis in Gel (SRH) Immunodiffusion Plaque Formation
Mich.	2,271	X	–	–	X	X		X	X	X	X	X	X	–	–	X	
Minn.	5,453	X	X	–	X	X	Biopsy – Autopsy Transplant Urines	X	X	–	X	–	X	X	X	X	
Miss.	2,339	–	X	X	–	–		–	–	–	X	X	–	–	–	–	
Mo.	1,424	X	X	X	X	X	Blood Tissue	X	X	X	X	X	X	–	X	X	
Mont.	341	X	X	X	X	–		X	X	–	X	X	X	–	–	–	
N.J.	7,843	X	X	X	X	X	CNS Spec. (Non-Arbovirus) Mosquito-Pools	X	X	X	X	–	X	X	X	X	
N.M.	432	X	–	–	X	X		X	X	X	X	X	X	–	X	–	
N.Y.	12,350	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
N.C.	3,201	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
Ohio	9,876	X	X	X	X	X		X	X	X	X	X	X	–	X	X	
Okla.	1,774	X	–	–	X	X	Urine, Lesion, Tissue, CSF	X	X	X	X	–	X	–	–	X	
Ore.	2,238	X	–	–	X	X	Biopsy/Autopsy Tissue	X	X	–	X	X	X	–	–	X	
S.C.	1,108	X	X	X	X	X	Urine, Tissue Vaginal Swab	X	X	X	X	X	X	X	X	X	Mycoplasma (Biphasic Media)
Tenn.	995	X	–	–	X	X		X	X	X	X	–	–	X	–	X	
Texas	6,489	X	X	X	X	–		X	X	X	X	X	X	–	X	–	
Utah	1,489	X	X	–	X	X	Herpes Viruses (CMV, Zoster Simplex LCM)	X	X	X	X	X	X	–	X	X	
Vt.	415	–	–	–	X	–		–	X	–	X	–	–	–	–	–	
Va.	629	X	X	–	X	X	Tissue, Urine Blood	X	X	X	X	X	X	–	–	X	
Wash.	560	X	X	X	X	X	Chlamydia-Avian & Human Origin	X	X	X	X	X	X	–	–	X	Macchiavello Stain
W.Va.	172	X	–	–	X	X	CMV Mycoplasma Pneumoniae Encephalitides	X	X	X	X	–	X	–	–	X	Mycoplasma Agar
Wisc.	4,017	X	X	–	X	X	CSF, Body Tissue, Fluids	X	X	X	X	X	X	X	X	X	

Table 4-17
IV. VIROLOGY
C. Rickettsial Identification Specimens

Lab & Region	Number of Specimens	Type of Specimens		Procedures Used		
		Tick	Other	Hemolymph	FA	Other
Total	**10,077**					
Average	916					
New England	**27**					
Conn.	–	–	–	–	–	
Mass.	27	–	X	–	–	Leucocytes and Clot
Me.	–	–	–	–	–	
N.H.	–	–	–	–	–	
R.I.	–	–	–	–	–	
Vt.	–	–	–	–	–	
Middle Atlantic	**35**					
N.J.	35	X	X	X	X	Egg Inoculation (Yolk Sac), Guinea Pig Inoc.
N.Y.	–	–	–	–	–	
Pa.						
East North Central	**196**					
Ill.	–	–	–	–	–	
Ind.	–	–	–	–	–	
Mich.	–	–	–	–	–	
Ohio	196	X	–	–	–	
Wisc.	–	–	–	–	–	
West North Central	**–**					
Ia.	–	–	–	–	–	
Kans.	–	–	–	–	–	
Minn.	–	–	–	–	–	
Mo.	–	–	–	–	–	
Nebr.	–	–	–	–	–	
N.D.	–	–	–	–	–	
S.D.	–	–	–	–	–	
South Atlantic	**5,951**					
Del.	–	–	–	–	–	
D.C.	–	–	–	–	–	
Fla.	–	–	–	–	–	
Ga.	–	–	–	–	–	
Md.	–	–	–	–	–	
N.C.	1,447	X	–	–	–	
S.C.	4,504	X	–	X	X	
Va.	–	–	–	–	–	
W.Va.	–	–	–	–	–	
East South Central	**7**					
Ala.	7	X	–	–	–	
Ky.	–	–	–	–	–	
Miss.	–	–	–	–	–	
Tenn.	–	–	–	–	–	
West South Central	**3,246**					
Ark.	15	X	–	–	–	
La.	–	–	–	–	–	
Okla.	–	–	–	–	–	
Tex.	3,231	X	–	X	–	
Mountain	**2**					
Ariz.	–	–	–	–	–	
Colo.	–	–	–	–	–	
Ida.	–	–	–	–	–	
Mont.	–	–	–	–	–	
Nev.	–	–	–	–	–	
N.M.	2	X	–	–	–	
Utah	–	–	–	–	–	
Wyo.	–	–	–	–	–	
Pacific	**613**					
Alaska	–	–	–	–	–	
Cal.	596	X	–	–	X	
Hawaii	–	–	–	–	–	
Ore.	–	–	–	–	–	
Wash.	17	X	–	–	–	
Territories						
Guam	–	–	–	–	–	
P.R.	–	–	–	–	–	
V.I.						

Table 4-18
V. VIROLOGY
D. Other Virology Specimens

Lab	Number of Specimens	Disease Entity – Procedures Used
TOTAL	**60,191**	
Average	6,688	
Ala.	844	Herpes Serology – Neutralization, SLE Serology – HI
Alaska	150	Zoonotic Viral Disease – Ducks, Reindeer, Seal, Fox – Tissue Culture
Del.	2,493	Rubella – HAI
Md.	7	Water – Tissue Culture, Shell Fish – Tissue Culture
Mass.	7	Legionnaire's Disease (Acute Viral Pneumonia) – Screened for Respiroviruses and Forwarded to CDC.
N.J.	53,043	Psittacosis – Gimenez Staining & Animal Inoculation Hepatitis – Radioimmunoassay and Agar Gel
Texas	3,625	Tick – FA
Utah	6	Psittacosis – Animal Inoculation
Guam	16	Swine Flu – Micro – Titration

Table 4-19
V. IMMUNOLOGY
Summary of Specimens by Category and Sub-Category

Lab & Region	Total Immunology Specimens	A Syphilis Serology	B Bacterial Serology	C Fungal Serology	D Parasitological Serology	E Viral Rickettsial Serology	F Other
TOTAL	**9,243,229**	**7,612,232**	**108,118**	**159,654**	**188,327**	**1,150,982**	**23,916**
Average	177,754	146,389	2,300	4,989	5,707	23,020	2,657
New England	**571,030**	**459,674**	**21,560**	**866**	**8,144**	**80,762**	**24**
Conn.	122,311	93,964	885	–	2,911	24,551	–
Mess.	223,543	213,809	90	–	1,900	7,720	24
Me.	41,370	22,210	–	718	3,276	15,166	–
N.H.	39,633	39,633	–	–	–	–	–
R.I.	97,808	56,344	20,309	–	–	21,155	–
Vt.	46,365	33,714	276	148	57	12,170	–
Middle Atlantic	**454,363**	**283,598**	**26,942**	**5,448**	**4,191**	**129,210**	**4,974**
N.J.	250,694	175,800	158	–	1,469	73,267	–
N.Y.	203,669	107,798	26,784	5,448	2,722	55,943	4,974
Pe.							
East North Central	**858,479**	**693,438**	**10,847**	**31,051**	**17,159**	**101,429**	**4,555**
Ill.	138,088	109,318	584	16,589	1,726	7,241	2,630
Ind.	80,403	71,622	803	1,800	514	5,664	–
Mich.	350,299	290,757	393	5,391	2,398	51,360	–
Ohio	105,880	82,714	4,821	4,767	2,563	11,015	–
Wisc.	183,809	139,027	4,246	2,504	9,958	26,149	1,925
West North Central	**989,895**	**744,157**	**21,174**	**33,215**	**4,680**	**185,942**	**727**
Ie.	253,193	162,364	8,851	2,062	2,049	77,867	–
Kens.	136,505	109,327	483	1,309	–	25,386	–
Minn.	289,354	222,152	6,738	14,304	1,596	43,837	727
Mo.	144,988	104,747	618	15,540	1,017	23,066	–
Nebr.	60,562	57,252	1,726	–	–	1,584	–
N.D.	59,662	57,247	1,952	–	18	445	–
S.D.	45,631	31,068	806	–	–	13,757	–
South Atlantic	**2,470,798**	**2,147,949**	**14,350**	**14,447**	**22,342**	**262,098**	**9,612**
Del.	32,663	32,200	–	–	–	463	–
D.C.	132,326	131,880	–	–	4	442	–
Fla.	631,491	582,957	1,159	–	1,317	46,058	–
Ge.	481,729	465,724	721	2,578	5,460	7,246	–
Md.	353,515	241,127	3,070	3,809	10,315	86,751	8,443
N.C.	365,546	293,444	2,164	4,478	2,784	61,507	1,169
S.C.	254,452	207,404	458	1,734	1,004	43,852	–
Ve.	172,877	147,748	6,749	1,846	1,301	15,233	–
W.Ve.	46,199	45,465	29	2	157	546	–
East South Central	**1,201,879**	**1,094,913**	**1,741**	**11,427**	**3,373**	**90,425**	**–**
Ale.	506,590	466,800	94	1,967	2,072	35,657	–
Ky.	152,395	130,336	113	3,555	1,301	17,090	–
Miss.	271,249	263,698	1,084	2,513	–	3,954	–
Tenn.	271,645	234,079	450	3,392	–	33,724	–
West South Central	**1,439,108**	**1,336,194**	**4,252**	**17,899**	**3,813**	**76,950**	**–**
Ark.	121,864	115,190	623	3,015	402	2,634	–
La.	245,270	180,202	119	7,408	672	56,869	–
Okla.	143,024	136,231	1,247	1,324	–	4,222	–
Tex.	928,950	904,571	2,263	6,152	2,739	13,225	–
Mountain	**606,272**	**457,260**	**3,065**	**21,691**	**5,675**	**114,557**	**4,024**
Ariz.	71,302	45,886	29	21,422	1,174	2,791	–
Colo.	219,230	154,443	171	–	–	64,616	–
Ida.	24,771	16,864	35	200	2,417	1,430	3,825
Mont.	56,210	30,164	249	69	120	25,409	199
Nev.	43,804	43,440	105	–	–	259	–
N.M.	94,211	85,400	56	–	–	8,755	–
Utah	75,134	68,186	2,349	–	1,964	2,635	–
Wyo.	21,610	12,877	71	–	–	8,662	–
Pacific	**515,557**	**262,071**	**2,812**	**23,594**	**118,950**	**108,130**	**–**
Alaske	76,599	65,165	30	–	–	11,404	–
Cal.	58,838	22,907	1,308	23,030	–	11,593	–
Hawaii	48,907	37,633	462	–	–	10,812	–
Ore.	270,268	98,196	681	564	118,950	51,877	–
Wash.	60,945	38,170	331	–	–	22,444	–
Territories	**135,848**	**132,978**	**1,375**	**16**	**–**	**1,479**	**–**
Guem	1,664	1,664	–	–	–	–	–
P.R.	134,184	131,314	1,375	16	–	1,479	–
V.I.							

Table 4-20
V. IMMUNOLOGY
A. Syphilis Serology Specimens

Lab & Region	Number of Specimens	Procedures Used									
		VDRL	RPR	ART	FTA-ABS	DEATP	FTA-ABS (IgM)	AFTA-ABS	MHA-TP	Dark-field	Other
Total	**7,612,232**										
Average	146,389										
New England	**459,674**										
Conn.	93,964	X	X	X	X	–	–	–	–	X	
Mass.	213,809	X	X	–	–	–	–	X	X	–	
Me.	22,210	X	–	–	X	–	–	–	–	–	VDRL – Sp. Fluid
N.H.	39,633	X	X	X	X	–	–	–	–	–	
R.I.	56,344	X	–	–	X	–	–	–	–	–	
Vt.	33,714	–	–	X	X	–	–	–	–	X	FA Darkfield
Middle Atlantic	**283,598**										
N.J.	175,800	X	–	–	X	–	–	–	–	–	
N.Y.	107,798	X	X	X	–	–	–	–	X	–	CSF – Reagin Screen
Pa.											
East North Central	**693,438**										
Ill.	109,318	X	X	–	X	–	–	–	–	–	
Ind.	71,622	X	X	X	X	–	–	–	–	–	
Mich.	290,757	X	–	–	X	–	–	–	X	X	
Ohio	82,714	X	–	–	X	–	–	–	–	–	
Wisc.	139,027	X	–	–	X	–	X	–	X	X	
West North Central	**744,157**										
Ia.	162,364	X	–	–	X	X	X	X	–	X	
Kans.	109,327	X	–	–	X	–	–	–	–	–	
Minn.	222,152	X	–	–	X	–	–	–	–	–	
Mo.	104,747	X	X	–	X	–	–	–	X	–	VDRL Quant.
Nebr.	57,252	X	–	–	X	–	–	–	–	–	USR
N.D.	57,247	X	X	–	X	–	–	–	–	X	
S.D.	31,068	X	X	–	X	–	–	–	X	–	
South Atlantic	**2,147,949**										
Del.	32,200	X	–	–	X	–	–	–	–	X	
D.C.	131,880	X	–	–	X	–	–	–	X	–	USR
Fla.	582,957	X	–	–	X	–	–	–	–	–	
Ga.	465,724	X	X	–	X	–	–	–	–	–	
Md.	241,127	X	X	–	X	–	X	–	–	X	
N.C.	293,444	X	–	–	X	X	X	–	–	X	
S.C.	207,404	X	X	–	X	–	–	–	–	–	
Va.	147,748	X	X	–	X	–	–	–	–	X	
W.Va.	45,465	X	X	–	X	–	–	–	–	–	
East South Central	**1,094,913**										
Ala.	466,800	X	–	–	X	–	–	–	–	–	
Ky.	130,336	X	X	–	X	–	–	–	–	X	
Miss.	263,698	X	X	–	X	–	–	–	–	–	
Tenn.	234,079	X	X	–	X	–	–	–	X	–	
West South Central	**1,336,194**										
Ark.	115,190	X	–	–	X	–	–	–	X	–	
La.	180,202	X	–	–	X	–	–	–	–	–	
Okla.	136,231	X	–	–	X	–	–	–	–	X	Total Protein
Tex.	904,571	X	X	–	X	–	–	–	–	–	
Mountain	**457,260**										
Ariz.	45,886	X	X	–	X	–	–	–	–	–	
Colo.	154,443	X	–	–	X	–	–	–	–	–	
Ida.	16,864	–	X	–	–	–	–	–	–	X	USR
Mont.	30,164	X	–	–	X	–	–	–	–	–	
Nev.	43,440	X	–	–	X	–	–	–	–	–	
N.M.	85,400	X	X	–	X	–	–	–	–	–	
Utah	68,186	X	X	–	X	–	–	–	–	–	
Wyo.	12,877	X	–	–	X	–	–	–	–	–	
Pacific	**262,071**										
Alaska	65,165	X	X	–	X	–	–	–	–	X	
Cal.	22,907	X	–	–	X	–	–	–	X	X	
Hawaii	37,633	X	X	–	X	–	–	–	–	X	Gum Mastic
Ore.	98,196	X	–	X	X	–	–	–	–	X	
Wash.	38,170	X	X	–	X	–	–	–	–	X	
Territories	**135,848**										
Guam	1,664	X	–	–	X	–	–	–	–	X	
P.R.	131,314	X	–	–	X	–	–	–	–	–	
V.I.											

Table 4-21
V. IMMUNOLOGY
B. Bacterial Serology Specimens

Lab & Region	Number of Specimens	Types of Specimens					
		Brucellosis	Tularemia	Strept. Antibodies	Leptospirosis	Salmonella	Other
Total	**108,118**						
Average	2,300						
New England	**21,560**						
Conn.	885	X	X	X	–	X	Bordetelle
Mess.	90	X	X	–	–	–	Typhoid
Me.	–	–	–	–	–	–	
N.H.	–	–	–	–	–	–	
R.I.	20,309	X	–	–	X	X	
Vt.	276	X	X	–	X	X	
Middle Atlantic	**26,942**						
N.J.	158	X	X	–	X	–	
N.Y.	26,784	X	X	X	–	X	Fluorescent GC Test
Pa.							
East North Central	**10,847**						
Ill.	584	X	X	–	–	–	Typhoid O+H, Weil-Felix
Ind.	803	X	X	–	X	X	
Mich.	393	X	X	X	X	–	Pertussis – Bordetella gr.
Ohio	4,821	X	X	–	X	–	
Wisc.	4,246	X	X	X	X	X	
West North Central	**21,174**						
Ie.	8,851	X	X	X	X	–	
Kans.	483	X	X	–	X	–	
Minn.	6,738	X	X	–	–	X	Heterophile, Weil-Felix, OX2, OX19
Mo.	618	X	X	–	–	–	
Nebr.	1,726	X	X	–	X	X	
N.D.	1,952	X	X	X	–	X	
S.D.	806	X	X	X	–	X	
South Atlantic	**14,350**						
Del.	–	–	–	–	–	–	
D.C.	–	–	–	–	–	–	
Fla.	1,159	X	–	–	X	–	Typhoid
Ga.	721	X	X	–	–	X	Proteus OX-19
Md.	3,070	X	X	X	X	X	Pertussis Diphtherie Antitoxin Tetenus Antitoxin Gonococcus
N.C.	2,164	X	X	X	X	X	
S.C.	458	X	X	X	X	X	Weil-Felix
Ve.	6,749	X	X	X	X	X	Proteus, OX19, OX2, OXD
W.Ve.	29	–	–	X	–	–	
East South Central	**1,741**						
Ala.	94	X	X	–	–	–	
Ky.	113	X	X	–	–	–	Typhoid O, H, VI Salmonelle A, B
Miss.	1,084	X	X	X	–	–	
Tenn.	450	X	X	–	–	–	
West South Central	**4,252**						
Ark.	623	X	X	–	X	X	Weil-Felix
Le.	119	X	X	–	X	–	
Okla.	1,247	X	X	–	X	–	
Tex.	2,263	X	X	–	X	X	
Mountain	**3,065**						
Ariz.	29	X	X	–	–	–	
Colo.	171	X	X	–	–	–	
Ida.	35	X	X	–	–	–	
Mont.	249	X	X	–	X	–	
Nev.	105	X	X	–	–	X	
N.M.	56	X	X	X	X	X	
Uteh	2,349	X	X	–	–	–	
Wyo.	71	X	X	–	–	–	
Pacific	**2,812**						
Aleske	30	X	X	X	–	–	
Cal.	1,308	X	X	–	X	X	Yersinia Enterocolitica Yarsinia Pseudotubarculosis
Hawaii	462	X	X	X	X	X	
Ore.	681	X	X	–	X	X	Staph., Phage, Botulism, atc.
Wash.	331	X	X	–	X	–	Proteus OX19, OX2, OXK
Territories	**1,375**						
Guam	–	–	–	–	–	–	
P.R.	1,375	X	–	X	–	X	Peratyphoid A-8, Proteus, (OXK-2-19)
V.I.							

Table 4-22
V. IMMUNOLOGY
C. Fungal Serology Specimens

Lab & Region	Number of Specimens	Types of Specimens						
		Blastomycosis	Coccidioido-mycosis	Histoplasmosis	Cryptococcus	Aspergillus	Candidiasis	Other
Total	**159,654**							
Average	4,989							
New England	**866**							
Conn.	–	–	–	–	–	–	–	
Mass.	–	–	–	–	–	–	–	
Me.	718	X	X	X	X	X	–	
N.H.	–	–	–	–	–	–	–	
R.I.	–	–	–	–	–	–	–	
Vt.	148	X	X	X	–	–	–	
Middle Atlantic	**5,448**							
N.J.	–	–	–	–	–	–	–	
N.Y.	5,448	X	X	X	X	X	X	Sporotrichosis Actinomycosis Phycomycetes Pigeon Fancier's Disease Bird Fancier's Disease Farmer's Lung Disease
Pa.								
East North Central	**31,051**							
Ill.	16,589	X	X	X	–	–	–	
Ind.	1,800	X	X	X	X	–	–	
Mich.	5,391	X	X	X	–	–	–	
Ohio	4,767	X	X	X	X	–	–	
Wisc.	2,504	X	X	X	X	–	–	
West North Central	**33,215**							
Ia.	2,062	X	X	X	X	–	–	
Kans.	1,309	X	X	X	–	–	–	
Minn.	14,304	X	X	X	–	–	–	
Mo.	15,540	X	X	X	–	–	–	
Nebr.	–	–	–	–	–	–	–	
N.D.	–	–	–	–	–	–	–	
S.D.	–	–	–	–	–	–	–	
South Atlantic	**14,447**							
Del.	–	–	–	–	–	–	–	
D.C.	–	–	–	–	–	–	–	
Fla.	–	–	–	–	–	–	–	
Ga.	2,578	X	X	X	–	–	–	
Md.	3,809	X	X	X	X	X	X	
N.C.	4,478	X	X	X	–	–	–	
S.C.	1,734	X	X	X	X	X	X	
Va.	1,846	X	X	X	–	–	–	
W.Va.	2	X	X	X	–	–	–	
East South Central	**11,427**							
Ala	1,967	X	X	X	–	X	–	
Ky.	3,555	X	X	X	–	–	–	
Miss.	2,513	X	X	X	–	–	–	
Tenn.	3,392	X	–	X	–	–	–	
West South Central	**17,899**							
Ark.	3,015	X	X	X	X	–	–	
La.	7,408	X	X	X	X	–	–	
Okla.	1,324	X	X	X	X	X	–	
Tex.	6,152	X	X	X	–	–	–	
Mountain	**21,691**							
Ariz.	21,422	X	X	X	–	–	–	
Colo.	–	–	–	–	–	–	–	
Ida.	200	X	X	X	–	–	–	
Mont.	69	X	X	X	X	X	X	
Nev.	–	–	–	–	–	–	–	
N.M.	–	–	–	–	–	–	–	
Utah	–	–	–	–	–	–	–	
Wyo.	–	–	–	–	–	–	–	
Pacific	**23,594**							
Alaska	–	–	–	–	–	–	–	
Cal.	23,030	–	X	X	X	–	–	
Hawaii	–	–	–	–	–	–	–	
Ore.	564	X	X	X	–	–	–	Sporotrichosis
Wash.	–	–	–	–	–	–	–	
Territories	**16**							
Guam	–	–	–	–	–	–	–	
P.R.	16	–	–	X	X	–	–	
V.I.								

Table 4-23
V. IMMUNOLOGY
D. Parasitological Serology Specimens

Lab & Region	Number of Specimens	Types of Specimens				
		Trichinosis	Toxoplasmosis	Amebiasis	Echinococcus	Trypanosomiasis
Total	**188,327**					
Average	5,707					
New England	**8,144**					
Conn.	2,911	X	X	–	–	–
Mass.	1,900	X	X	X	X	X
Me.	3,276	–	X	–	–	–
N.H.	–	–	–	–	–	–
R.I.	–	–	–	–	–	–
Vt.	57	X	X	X	X	–
Middle Atlantic	**4,191**					
N.J.	1,469	X	X	–	–	–
N.Y.	2,722	X	X	X	–	–
Pa.						
East North Central	**17,159**					
Ill.	1,726	–	X	–	–	–
Ind.	514	X	X			
Mich.	2,398	X	X	–	–	–
Ohio	2,563	–	X	–	–	–
Wisc.	9,958	–	X	–	–	–
West North Central	**4,680**					
Ia.	2,049	X	X	–	–	–
Kans.	–	–	–	–	–	–
Minn.	1,596	–	X	–	–	–
Mo.	1,017	X	X	–	–	–
Nebr.	–	–	–	–	–	–
N.D.	18	–	X	–	–	–
S.D.	–	–	–	–	–	–
South Atlantic	**22,342**					
Del.	–	–	–	–	–	–
D.C.	4	–	X	–	–	–
Fla.	1,317	–	X	–	–	–
Ga.	5,460	–	X	–	–	–
Md.	10,315	X	X	X	X	X
N.C.	2,784	–	X	–	–	–
S.C.	1,004	–	X	X	–	–
Va.	1,301	X	X	–	–	–
W.Va.	157	–	X	–	–	–
East South Central	**3,373**					
Ala.	2,072	–	X	X	–	–
Ky.	1,301	–	X	–	–	–
Miss.	–	–	–	–	–	–
Tenn.	–	–	–	–	–	–
West South Central	**3,813**					
Ark.	402	–	X	–	–	–
La.	672	–	X	–	–	–
Okla.	–	–	–	–	–	–
Tex.	2,739	–	X	–	–	–
Mountain	**5,675**					
Ariz.	1,174	–	X	–	–	–
Colo.	–	–	–	–	–	–
Ida.	2,417	–	X	–	–	–
Mont.	120	X	X	X	X	X
Nev.	–	–	–	–	–	–
N.M.	–	–	–	–	–	–
Utah	1,964	–	X	–	–	–
Wyo.	–	–	–	–	–	–
Pacific	**118,950**					
Alaska	–	–	–	–	–	–
Cal.	–	–	–	–	–	–
Hawaii	–	–	–	–	–	–
Ore.	118,950	X	X	–	–	–
Wash.	–	–	–	–	–	–
Territories						
Guam	–	–	–	–	–	–
P.R.	–	–	–	–	–	–
V.I.						

Table 4-24
V. IMMUNOLOGY
E. Viral and Rickettsial Serology Specimens

Lab & Region	Number of Specimens	Procedures Used													Other
		CF	HI	HAdl	Immunodiffusion (Agar Gel)	Neut. (Tissue Cul.)	Neut. Rabies	FA	Radioimmunoassay	Passive Hemagglutination	Reverse Passive Hemagglutination	OX-Cell Hemolysin	Slide Agglutination	Heterophile Tests	
Total	**1,150,982**														
Average	23,020														
New England	**80,762**														
Conn.	24,551	X	X	–	X	X	–	–	X	–	X	X	–	–	
Mass.	7,720	X	X	X	X	X	–	–	–	–	–	X	–	–	Plaque – Reduction Neut.
Me.	15,166	X	X	–	–	–	–	X	–	–	X	X	–	X	
N.H.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
R.I.	21,155	–	X	–	–	–	–	–	–	–	–	–	–	–	
Vt.	12,170	X	X	–	–	–	–	–	–	–	–	X	X	–	
Middle Atlantic	**129,210**														
N.J.	73,267	X	X	–	X	X	–	X	X	X	X	–	–	–	Neut. – Animals, Weil-Felix
N.Y.	55,943	X	X	–	X	X	–	X	X	X	X	X	X	–	Anti-HBs (RIA), HBsAg Conf, CEP.
Pa.															
East North Central	**101,429**														
Ill.	7,241	X	X	–	–	–	–	–	–	–	–	–	–	X	
Ind.	5,664	X	X	–	–	X	–	–	–	–	–	X	X	X	
Mich.	51,360	X	X	–	–	X	–	–	X	–	–	X	–	–	
Ohio	11,015	X	X	–	–	–	–	–	–	–	–	X	–	–	
Wisc.	26,149	X	X	X	–	X	X	X	X	X	–	X	–	–	CEP, Igm, RFFIT
West North Central	**185,942**														
Ia.	77,867	X	X	–	–	X	–	–	X	–	–	–	–	X	
Kans.	25,386	X	X	–	–	X	–	–	X	–	–	–	–	–	
Minn.	43,837	X	X	X	–	X	–	X	X	–	–	–	–	–	
Mo.	23,066	X	X	–	–	–	–	–	X	–	–	–	X	X	
Nebr.	1,584	–	X	–	–	–	–	–	–	–	–	–	–	X	Weil-Felix
N.D.	445	X	X	–	–	–	–	X	–	–	–	X	X	X	
S.D.	13,757	–	X	–	–	–	–	–	–	–	–	X	–	X	
South Atlantic	**262,098**														
Del.	463	X	X	–	–	X	–	X	–	X	–	–	–	–	
D.C.	442	X	X	–	–	–	–	–	–	–	–	–	X	–	
Fla.	46,058	X	X	X	–	X	–	–	–	–	X	–	–	X	
Ga.	7,246	X	X	X	–	X	–	X	–	X	–	–	–	–	
Md.	86,751	X	X	–	X	X	–	X	X	–	X	X	X	–	
N.C.	61,507	X	X	X	–	X	–	X	–	–	–	X	X	X	
S.C.	43,852	X	X	–	X	–	–	–	–	–	–	X	X	–	
Va.	15,233	X	X	X	–	X	–	X	–	–	–	X	X	X	
W.Va.	546	X	–	–	–	–	–	–	–	–	–	–	–	X	
East South Central	**90,425**														
Ala.	35,657	X	X	X	–	X	–	–	–	–	–	–	–	–	
Ky.	17,090	X	X	–	–	–	–	–	–	–	–	–	–	X	
Miss.	3,954	–	X	–	–	–	–	–	–	–	–	–	–	–	
Tenn.	33,724	X	X	–	–	X	–	–	–	–	–	–	–	–	
West South Central	**76,950**														
Ark.	2,634	X	X	X	–	–	–	X	X	X	X	–	X	X	
La.	56,869	X	X	–	–	–	–	–	–	–	–	–	–	–	
Okla.	4,222	X	X	–	–	–	–	–	–	–	–	–	X	X	
Tex.	13,225	X	X	–	–	–	–	–	–	–	–	–	–	–	
Mountain	**114,557**														
Ariz.	2,791	X	X	–	–	–	–	–	–	–	–	–	–	–	
Colo.	64,616	X	X	–	–	–	–	–	–	–	–	X	–	X	
Ida.	1,430	X	X	–	–	–	–	X	–	X	X	–	–	–	
Mont.	25,409	X	X	–	–	X	–	–	–	–	–	–	–	–	
Nev.	259	–	X	–	–	–	–	–	–	–	–	–	–	X	
N.M.	8,755	X	X	–	–	X	–	X	–	X	X	–	X	–	
Utah	2,635	X	X	X	–	X	–	–	–	–	–	–	–	X	Weil-Felix, Cold Agg.
Wyo.	8,662	–	X	–	–	–	–	–	–	–	–	–	X	–	
Pacific	**108,130**														
Alaska	11,404	–	X	–	–	–	–	–	–	–	–	–	–	X	
Cal.	11,593	X	X	X	X	X	X	X	X	X	X	–	–	–	
Hawaii	10,812	X	X	X	–	X	–	X	–	–	–	–	–	X	
Ore.	51,877	X	X	X	–	X	X	–	–	–	–	–	X	X	EB Virus
Wash.	22,444	X	X	X	–	–	X	–	–	–	–	–	X	–	
Territories	**1,479**														
Guam	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
P.R.	1,479	–	X	–	–	–	–	–	–	–	–	–	X	X	
V.I.															

Table 4-25
V. IMMUNOLOGY
F. Other Serology Specimens

Lab & Region	Number of Specimens	Disease Entity – Procedures Used
Total	**23,916**	
Average	2,657	
Ida.	3,825	Rubella, Influenza, Herpes – HI
Ill.	2,630	Arbovirus – HI
Md.	8,443	Serum Proteins – Electrophoresis, IEOP, Gel Diffusion Complement – Gel Diffusion Fetal Antigen – RIA Auto Immune – IFA, Slide Agglutination, TE Gammopathies – Electrophoresis, IEOP Hepatitis B – RIA
Mass.	24	Rubella – HI/SRH, Measles – HI, Arboviruses – PR – Neut (Fractionation of IgM-IgG in Sucrose, Followed by and Quantitated by Standardized Immunodiffusion)
Minn.	727	ASO – CRP – Microtiter
Mont.	199	Various Serologies and Referral, Torch, Hepatitis, EBV, Rabies, etc.
N.Y.	4,974	Rheumatoid Arthritis – Latex Agglutination ANA – IFA C-reactive protein – Precipitin Proteus – Bacterial Agglutination AMA – IFA
N.C.	1,169	Serum hepatitis – RIA
Wisc.	1,925	Neural Tube Defect (Alpha Fetoprotein) – CEP Immunodeficiencies, Serum Protein Abnormalities – RID, RIA Thyroid Disease – IHA

Table 4-26
VI. HEMATOLOGY
SUMMARY OF SPECIMENS BY CATEGORY AND SUB–CATEGORY

Lab & Region	Total Hematology Specimens	A Hematology Specimens	B Immunohematology Specimens	C Hemoglobinopathy Specimens
Total	**1,539,844**	**798,758**	**211,639**	**529,447**
Average	39,483	33,282	7,299	20,363
New England	**15,219**	**6,437**	**765**	**8,017**
Conn.	13,302	6,239	–	7,063
Mass.	–	–	–	–
Me.	408	–	408	–
N.H.	–	–	–	–
R.I.	1,509	198	357	954
Vt.	–	–	–	–
Middle Atlantic	**5,139**	**2,500**	**2,082**	**557**
N.J.	2,855	2,422	433	–
N.Y.	2,284	78	1,649	557
Pa.				
East North Central	**59,828**	**17,086**	**35,994**	**6,748**
Ill.	2,487	–	–	2,487
Ind.	–	–	–	–
Mich.	24,741	16,770	7,971	–
Ohio	4,003	–	33	3,970
Wisc.	28,597	316	27,990	291
West North Central	**26,713**	**–**	**19,011**	**7,702**
Ia.	–	–	–	–
Kans.	–	–	–	–
Minn.	–	–	–	–
Mo.	7,702	–	–	7,702
Nebr.	–	–	–	–
N.D.	18,585	–	18,585	–
S.D.	426	–	426	–
South Atlantic	**497,031**	**194,697**	**67,455**	**234,879**
Del.	4,420	1,468	–	2,952
D.C.	25,893	22,773	3,120	–
Fla.	153,909	65,574	18,552	69,783
Ga.	50,493	–	12,200	38,293
Md.	95,733	52,569	17,934	25,230
N.C.	53,083	2,324	–	50,759
S.C.	79,154	49,709	7,630	21,815
Va.	33,631	–	8,019	25,612
W.Va.	715	280	–	435
East South Central	**249,410**	**107,210**	**38,030**	**104,170**
Ala.	67,872	–	10,199	57,673
Ky.	18,955	3,793	8,569	6,593
Miss.	160,885	103,417	17,564	39,904
Tenn.	1,698	–	1,698	–
West South Central	**516,044**	**352,389**	**7,246**	**156,409**
Ark.	40,958	23,177	3,577	14,204
La.	–	–	–	–
Okla.	8,474	269	3,669	4,536
Tex.	466,612	328,943	–	137,669
Mountain	**33,781**	**5,601**	**20,377**	**7,803**
Ariz.	6,025	–	–	6,025
Colo.	18,192	–	18,192	–
Ida.	4,479	4,290	189	–
Mont.	–	–	–	–
Nev.	2,442	1,311	474	657
N.M.	2,643	–	1,522	1,121
Utah	–	–	–	–
Wyo.	–	–	–	–
Pacific	**7,973**	**100**	**4,976**	**2,897**
Alaska	4,981	8	4,973	–
Cal.	92	92	–	–
Hawaii	3	–	3	–
Ore.	–	–	–	–
Wash.	2,897	–	–	2,897
Territories	**128,706**	**112,738**	**15,703**	**265**
Guam	4,915	4,599	316	–
P.R.	123,791	108,139	15,387	265
V.I.				

Table 4-27
VI. HEMATOLOGY
A. Hematology Specimens

Lab & Region	Number of Specimens	Hematocrit	Hemoglobin	Cell Counts	Other
Total	**798,758**				
Average	33,282				
New England	**6,437**				
Conn.	6,239	X	X	X	Sed. Rata, Reticulocyta Count, One-Step Prothrombin Time
Mass.	–	–	–	–	
Me.	–	–	–	–	
N.H.	–	–	–	–	
R.I.	198	X	X	X	
Vt.	–	–	–	–	
Middle Atlantic	**2,500**				
N.J.	2,422	X	X	–	
N.Y.	78	–	–	X	
Pa.					
East North Central	**17,086**				
Ill.	–	–	–	–	
Ind.	–	–	–	–	
Mich.	16,770	X	X	X	Sed. Rata, Prothrombin, Pletalet & Reticulocyte
Ohio	–	–	–	–	
Wisc.	316	X	X	X	L.E. Prep., Sed. Rata, Pletelet Count, Reticulocyta Count
West North Central					
Ia.	–	–	–	–	
Kens.	–	–	–	–	
Minn.	–	–	–	–	
Mo.	–	–	–	–	
Nabr.	–	–	–	–	
N.D.	–	–	–	–	
S.D.	–	–	–	–	
South Atlantic	**194,697**				
Del.	1,468	X	X	X	
D.C.	22,773	X	X	X	
Fla.	65,574	X	X	–	
Ga.	–	–	–	–	
Md.	52,569	X	X	X	L.E. Prap, Eosinophile Count, Platalat Count, Sedimentation Retes, Differantiels
N.C.	2,324	X	X	X	
S.C.	49,709	X	X	X	Sed. Reta
Ve.	–	–	–	–	
W.Ve.	280	X	X	X	
East South Central	**107,210**				
Ala.	–	–	–	–	
Ky.	3,793	X	X	X	Diffarential
Miss.	103,417	X	X	X	MCV, MCH, MCHC
Tann.	–	–	–	–	
West South Central	**352,389**				
Ark.	23,177	X	X	X	
Le.	–	–	–	–	
Okla.	269	X	X	X	
Tex.	328,943	X	X	X	
Mountain	**5,601**				
Ariz.	–	–	–	–	
Colo.	–	–	–	–	
Ida.	4,290	–	X	X	Sed. Reta
Mont.	–	–	–	–	
Nav.	1,311	X	X	X	
N.M.	–	–	–	–	
Utah	–	–	–	–	
Wyo.	–	–	–	–	
Pacific	**100**				
Aleska	8	–	–	X	Diffarential
Cel.	92	X	X	X	Differential
Hawaii	–	–	–	–	
Ore.	–	–	–	–	
Wesh.	–	–	–	–	
Territories	**112,738**				
Guem	4,599	X	X	X	Sed. Rate, Indices, Bleeding & Clotting Time, Retic.
P.R.	108,139	X	X	X	Sad. Reta, ANA, L.E. Prep., Prothrombin Time, Pletelats
V.I.					

Table 4-28
VI. HEMATOLOGY
B. Immunohematology Specimens

Lab & Region	Number of Specimens	Blood Grouping	Blood Typing	Other
Total	**211,639**			
Average	7,299			
New England	**765**			
Conn.	—	—	—	
Mass.	—	—	—	
Me.	408	—	X	
N.H.	—	—	—	
R.I.	357	X	X	
Vt.	—	—	—	
Middle Atlantic	**2,082**			
N.J.	433	X	X	
N.Y.	1,649	X	X	Extended Typing, Antibody Detection, Ident, and Titration
Pa.				
East North Central	**35,994**			
Ill.	—	—	—	
Ind.	—	—	—	
Mich.	7,971	X	X	M-N
Ohio	33	X	X	
Wisc.	27,990	X	X	Paternity Exclusion Studies
West North Central	**19,011**			
Ia.	—	—	—	
Kans.	—	—	—	
Minn.	—	—	—	
Mo.	—	—	—	
Nebr.	—	—	—	
N.D.	18,585	X	X	
S.D.	426	—	—	Rh Factor (June '76 Until Jan '77)
South Atlantic	**67,455**			
Del.	—	—	—	
D.C.	3,120	X	X	
Fla.	18,552	—	X	
Ga.	12,200	X	—	Rh Antibody
Md.	17,934	X	X	
N.C.	—	—	—	
S.C.	7,630	X	X	Rh Factor
Va.	8,019	X	X	Rh Factor, Atypical Antibodies
W.Va.	—	—	—	
East South Central	**38,030**			
Ala.	10,199	—	X	
Ky.	8,569	X	X	Antibody Identification
Miss.	17,564	X	X	Indirect Coombs (Identification & Titration)
Tenn.	1,698	X	X	
West South Central	**7,246**			
Ark.	3,577	X	X	Rh titer Coombs
La.	—	—	—	
Okla.	3,669	X	X	
Tex.	—	—	—	
Mountain	**20,377**			
Ariz.	—	—	—	
Colo.	18,192	—	—	Rh (D) Typing
Ida.	189	X	—	Dried Blood Stains
Mont.	—	—	—	
Nev.	474	X	X	
N.M.	1,522	X	X	Rh Antibody
Utah	—	—	—	
Wyo.	—	—	—	
Pacific	**4,976**			
Alaska	4,973	X	X	Du
Cal.	—	—	—	
Hawaii	3	X	—	
Ore.	—	—	—	
Wash.	—	—	—	
Territories	**15,703**			
Guam	316	X	X	
P.R.	15,387	X	X	
V.I.				

Table 4-29
VI. HEMATOLOGY
C. Hemoglobinopathy Specimens

Lab & Region	Number of Specimens	Procedures Used						
		Hemoglobin Cellulose Acetate Electro.	Citrate Agar Electrophoresis	Solubility Testing	Fetal Hemoglobin Assay	Hemoglobin A_2 Quantitation	Densitometry	Other
Total	**529,447**							
Average	20,363							
New England	**8,017**							
Conn.	7,063	X	X	X	–	X	–	
Mass.	–	–	–	–	–	–	–	
Me.	–	–	–	–	–	–	–	
N.H.	–	–	–	–	–	–	–	
R.I.	954	X	–	X	–	–	X	
Vt.	–	–	–	–	–	–	–	
Middle Atlantic	**557**							
N.J.	–	–	–	–	–	–	–	
N.Y.	557	X		X	X	X	X	Globin Chein Electrophoresis
Pe.								
East North Central	**6,748**							
Ill.	2,487	X	X	X	X	X	–	
Ind.	–	–	–	–	–	–	–	
Mich.	–	–	–	–	–	–	–	
Ohio	3,970	X	X	X	–	–	–	
Wisc.	291	X	–	–	–	–	–	Ortho Screening Test
West North Central	**7,702**							
Ia.	–	–	–	–	–	–	–	
Kans.	–	–	–	–	–	–	–	
Minn.	–	–	–	–	–	–	–	
Mo.	7,702	X	X	X	–	–	X	
Nebr.	–	–	–	–	–	–	–	
N.D.	–	–	–	–	–	–	–	
S.D.	–	–	–	–	–	–	–	
South Atlantic	**234,879**							
Del.	2,952	X	–	–	–	–	X	
D.C.	–	–	–	–	–	–	–	
Fla.	69,783	X	X	X	X	X	–	
Ge.	38,293	X	X	X	X	–	–	
Md.	25,230	X	X	X	X	X	X	
N.C.	50,759	X	X	X	X	X	X	
S.C.	21,815	X	X	X	–	–	–	
Va.	25,612	X	–	X	–	–	X	
W.Ve.	435	X	X	X	–	–	–	
East South Central	**104,170**							
Ala.	57,673	X	X	–	–	–	–	
Ky.	6,593	X	X	X	X	X	X	
Miss.	39,904	X	–	–	–	–	–	
Tenn.	–	–	–	–	–	–	–	
West South Central	**156,409**							
Ark.	14,204	X	–	X	–	–	–	
Le.	–	–	–	–	–	–	–	
Okla.	4,536	X	X	X	–	–	–	
Tax.	137,669	X	X	X	–	–	X	
Mountain	**7,803**							
Ariz.	6,025	X	X	–	–	–	X	
Colo.	–	–	–	–	–	–	–	
Ide.	–	–	–	–	–	–	–	
Mont.	–	–	–	–	–	–	–	
Nev.	657	–	–	X	–	–	–	
N.M.	1,121	X	–	–	–	–	–	
Utah	–	–	–	–	–	–	–	
Wyo.	–	–	–	–	–	–	–	
Pacific	**2,897**							
Alaske	–	–	–	–	–	–	–	
Cel.	–	–	–	–	–	–	–	
Hawaii	–	–	–	–	–	–	–	
Ore.	–	–	–	–	–	–	–	
Wash.	2,897	X	X	X	–	–	–	
Territories	**265**							
Guam	–	–	–	–	–	–	–	
P.R.	265	X	–	X	–	–	–	Sickle Cell Preparation
V.I.								

Table 4-30

VII. CLINICAL CHEMISTRY

Summary of Specimens by Category and Sub-category

Lab & Region	Total Clinical Chemistry Specimens	A	B	C	D	E
		Clinical Chemistry Specimens	Urinalysis Specimens	Inborn Errors of Metabolism	Multiphasic Screening	Other Clinical Chemistry
Total	**3,255,776**	**795,014**	**123,633**	**2,046,040**	**244,780**	**46,309**
Average	73,995	30,577	7,273	53,843	24,478	9,262
New England	**413,765**	**7,536**	**1,431**	**392,138**	**12,660**	**–**
Conn.	115,714	5,560	1,420	100,964	7,770	–
Mass.	246,218	–	–	246,218	–	–
Me.	15,944	–	–	15,944	–	–
N.H.	21,900	–	–	17,010	4,890	–
R.I.	13,989	1,976	11	12,002	–	–
Vt.	–	–	–	–	–	–
Middle Atlantic	**79,108**	**5,200**	**–**	**72,348**	**1,560**	**–**
N.J.	51	–	–	51	–	–
N.Y.	79,057	5,200	–	72,297	1,560	–
Pa.						
East North Central	**384,612**	**78,192**	**8,008**	**262,233**	**36,108**	**71**
Ill.	–	–	–	–	–	–
Ind.	–	–	–	–	–	–
Mich.	132,871	25,030	8,008	99,833	–	–
Ohio	171,979	–	–	162,400	9,579	–
Wisc.	79,762	53,162	–	–	26,529	71
West North Central	**181,738**	**18,793**	**–**	**162,945**	**–**	**–**
Ia.	4,212	–	–	4,212	–	–
Kans.	20,975	–	–	20,975	–	–
Minn.	75,034	–	–	75,034	–	–
Mo.	62,619	18,793	–	43,826	–	–
Nebr.	2,758	–	–	2,758	–	–
N.D.	16,140	–	–	16,140	–	–
S.D.	–	–	–	–	–	–
South Atlantic	**993,532**	**266,293**	**80,897**	**459,994**	**185,903**	**445**
Del.	16,433	–	796	15,637	–	–
D.C.	27,412	24,520	–	2,892	–	–
Fla.	260,293	56,432	1,477	72,694	129,690	–
Ga.	81,270	8,995	–	72,275	–	–
Md.	187,162	57,886	35,342	93,934	–	–
N.C.	212,065	90,529	72	83,417	38,047	–
S.C.	101,780	2,924	42,708	43,036	13,112	–
Va.	67,566	18,720	–	48,401	–	445
W.Va.	39,551	6,287	502	27,708	5,054	–
East South Central	**291,441**	**82,547**	**1,142**	**190,654**	**8,549**	**8,549**
Ala.	95,922	5,641	–	90,281	–	–
Ky.	46,237	769	1,142	44,326	–	–
Miss.	93,235	76,137	–	–	8,549	8,549
Tenn.	56,047	–	–	56,047	–	–
West South Central	**556,321**	**264,044**	**663**	**254,468**	**–**	**37,146**
Ark.	27,777	4,073	333	23,371	–	–
La.	37,153	–	–	7	–	37,146
Okla.	46,557	2,737	330	43,490	–	–
Tex.	444,834	257,234	–	187,600	–	–
Mountain	**61,565**	**453**	**2,412**	**58,700**	**–**	**–**
Ariz.	–	–	–	–	–	–
Colo.	14,985	–	–	14,985	–	–
Ida.	7,614	–	1,876	5,738	–	–
Mont.	–	–	–	–	–	–
Nev.	18,312	–	536	17,776	–	–
N.M.	20,623	422	–	20,201	–	–
Utah	31	31	–	–	–	–
Wyo.	–	–	–	–	–	–
Pacific	**204,545**	**698**	**11,189**	**192,560**	**–**	**98**
Alaska	–	–	–	–	–	–
Cal.	696	474	70	152	–	–
Hawaii	11,343	224	11,119	–	–	–
Ore.	156,310	–	–	156,310	–	–
Wash.	36,196	–	–	36,098	–	98
Territories	**89,149**	**71,258**	**17,891**	**–**	**–**	
Guam	3,830	639	3,191	–	–	–
P.R.	85,319	70,619	14,700	–	–	–
V.I.						

Table 4-31
VII. CLINICAL CHEMISTRY
A. Clinical Chemistry Specimens

Lab & Region	Number of Specimens	Types of Tests																						
		Glucose	Cholesterol	BUN	Uric Acid	Transaminases	Alkaline Phos.	Total Proteins	Serum Iron	Iron Binding Capacity	Triglycerides	Lactic Acid	Bilirubin	T_4, T_3, T_3 Uptake	Sodium	Potassium	Phosphorous	Calcium	Creatinine	Acid Phosphatase	Albumin	Chloride	LDH	Other
Total	**795,014**																							
Average	30,577																							
Ala.	5,641	X	–	–	–	–	–	X	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Ark.	4,073	X	X	X	X	X	X	X	–	–	X	–	X	X	X	X	–	X	X	–	X	X	–	
Cal.	474	X	X	X	X	X	–	X	–	–	–	–	X	–	X	X	–	X	X	–	–	X	–	
Conn.	5,560	X	X	X	X	X	X	X	X	X	X	–	X	–	X	X	X	X	X	–	X	X	X	Amylase
D.C.	24,520	X	X	X	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Fla.	56,432	X	X	X	X	X	–	–	–	–	X	–	X	–	–	–	–	–	–	–	–	–	–	Cholinastarase
Ga.	8,995	X	X	–	–	–	–	–	–	–	X	–	–	–	X	X	–	–	X	–	–	–	–	
Hawaii	224	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	Occult Blood (Stool)
Ky.	769	X	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Md.	57,886	X	X	X	X	X	X	X	X	X	X	–	X	–	X	X	X	X	X	X	X	X	X	
Mich.	25,030	X	X	X	X	X	X	X	–	–	–	–	X	–	X	X	X	X	X	X	X	X	X	
Miss.	76,137	X	X	–	X	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Mo.	18,793	X	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
N.M.	422	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	Lithium in Blood Cholinesterase
N.Y.	5,200	X	X	X	X	X	X	X	X	–	X	–	X	–	–	–	X	X	X	X	X	X	X	Amylasa, Lipase Glutamryla Transferase Magnesium Laucine Aminopaptidase
N.C.	83,417	X	X	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Okla.	2,737	X	X	X	–	X	X	–	–	–	X	–	X	–	–	–	–	–	–	–	–	–	–	
R.I.	1,976	X	X	X	X	X	X	X	–	–	–	X	X	–	X	X	–	X	X	–	–	–	–	
S.C.	101,780	X	X	X	X	X	X	X	–	–	–	–	X	–	X	X	X	X	X	–	X	X	–	Amylase, Co_2
Texas	257,234	X	X	X	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Utah	31	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	Cholinesterase
Va.	18,720	X	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
W.Va.	6,287	X	–	–	–	–	–	–	–	–	X	–	–	–	X	X	–	–	X	–	–	–	–	
Wisc.	53,162	X	X	X	X	X	X	X	X	–	X	–	X	X	X	X	X	X	X	–	X	X	–	Lipoprotain Elactrophorasis Serum Protein Elactrophorasis Lithium, Magnesium, Digoxin
Guam	639	X	X	X	X	X	–	X	–	–	–	–	X	–	–	–	–	–	X	–	X	–	X	Serum Acetona
P.R.	70,619	X	X	X	X	X	X	X	–	–	X	–	X	X	X	X	X	X	X	X	X	X	X	Amylase – Fibrinogen Thymol – 17 Ketos Hanger Lithium – Proteins (Electrophoresis) Lead – Icteric Indax-Cholastarol Ester.

Table 4-32
VII. CLINICAL CHEMISTRY
B. Urinalysis

Lab & Region	Number of Specimens	Procedures Used			
		Routine	Microscopic	Pregnancy Test	Other
Total	**123,633**				
Average	7,273				
New England	**1,431**				
Conn.	1,420	X	X	—	
Mass.	—	—	—	—	
Me.	—	—	—	—	
N.H.	—	—	—	—	
R.I.	11	X	X	—	
Vt.	—	—	—	—	
Middle Atlantic	**—**				
N.J.	—	—	—	—	
N.Y.	—	—	—	—	
Pa.					
East North Central	**8,008**				
Ill.	—	—	—	—	
Ind.	—	—	—	—	
Mich.	8,008	X	X	—	
Ohio	—	—	—	—	
Wisc.	—	—	—	—	
West North Central	**—**				
Ia.	—	—	—	—	
Kans.	—	—	—	—	
Minn.	—	—	—	—	
Mo.	—	—	—	—	
Nebr.	—	—	—	—	
N.D.	—	—	—	—	
S.D.	—	—	—	—	
South Atlantic	**80,897**				
Del.	796	X	X	—	
D.C.	—	—	—	—	
Fla.	1,477	X	—	X	
Ga.	—	—	—	—	
Md.	35,342	X	X	X	
N.C.	72	X	X	—	
S.C.	42,708	X	X	X	Specific Gravity
Va.	—	—	—	—	
W.Va.	502	X	X	—	
East South Central	**1,142**				
Ala.	—	—	—	—	
Ky.	1,142	X	X	X	
Miss.	—	—	—	—	
Tenn.	—	—	—	—	
West South Central	**663**				
Ark.	333	X	X	—	
La.	—	—	—	—	
Okla.	330	X	X	X	
Tex.	—	—	—	—	
Mountain	**2,412**				
Ariz.	—	—	—	—	
Colo.	—	—	—	—	
Ida.	1,876	X	—	X	Sp. Gr. and Protein, Microstix
Mont.	—	—	—	—	
Nev.	536	X	X	—	
N.M.	—	—	—	—	
Utah	—	—	—	—	
Wyo.	—	—	—	—	
Pacific	**11,189**				
Alaska	—	—	—	—	
Cal.	70	X	—	X	
Hawaii	11,119	—	—	—	INH Level
Ore.	—	—	—	—	
Wash.	—	—	—	—	
Territories	**17,891**				
Guam	3,191	X	X	X	Acetone, Bile
P.R.	14,700	X	X	—	
V.I.					

Table 4-33
VII. CLINICAL CHEMISTRY
C. Inborn Errors of Metabolism

Lab & Region	Number of Specimens	Inborn Error Assays													
		PKU	Tyrosinemia	Galactosemia	MSUD	Hyperthyroidism	Amino Acid Chromatography	Homocystinuria	Maternal PKU	Amino Acid Disorders	Organic Acid Disorders	Disulfidurias	Glucosurias	Histodinemia	Other
Total	**2,046,040**														
Average	53,843														
New England	**392,138**														
Conn.	100,964	X	X	X	–	X	X	–	–	–	–	–	–	–	Tay – Sachs
Mass.	246,218	X	–	X	X	X	X	X	X	X	X	X	–	X	
Me.	15,944	X	X	X	X	X	–	–	–	–	–	–	–	–	
N.H.	17,010	X	–	–	–	–	–	–	–	–	–	–	–	–	
R.I.	12,002	X	X	X	–	–	X	X	–	X	–	–	–	–	
Vt.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Middle Atlantic	**72,348**														
N.J.	51	X	–	–	–	–	–	–	–	–	–	–	–	–	
N.Y.	72,297	X	–	X	X	–	–	X						X	Sickle Hemoglobin (HGS)
Pa.															Adenosina Daaminase Deficiency
East North Central	**262,233**														
Ill.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Ind.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Mich.	99,833	X	–	–	–	–	–	–	–	–	–	–	–	–	
Ohio	162,400	X	–	X	–	–	–	X	X	–	–	–	–	–	
Wisc.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
West North Central	**162,945**														
Ia.	4,212	X	–	–	–	–	–	–	–	–	–	–	–	–	
Kans.	20,975	X	–	–	–	–	–	–	X	–	–	–	–	–	
Minn.	75,034	X	–	X	–	–	–	–	–	–	–	–	–	–	
Mo.	43,826	X	–	–	–	–	–	–	–	–	–	–	–	–	
Nebr.	2,758	X	–	–	–	–	–	–	–	–	–	–	–	–	
N.D.	16,140	X	–	–	–	–	–	–	–	–	–	–	–	–	
S.D.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
South Atlantic	**459,994**														
Dal	15,637	X	–	–	–	–	–	–	–	–	–	–	–	–	
D.C.	2,892	–	–	–	–	–	–	–	–	–	–	–	–	–	Hemoglobinopathias
Fla.	72,694	X	–	–	–	–	–	–	–	–	–	–	–	–	
Ga.	72,275	X	X	X	X	–	–	X	–	–	–	–	–	–	
Md.	93,934	X	X	–	X	X	–	X	X	–	–	–	–	X	
N.C.	83,417	X	X	–	–	–	–	–	–	–	–	–	–	–	
S.C.	43,036	X	–	–	–	–	–	–	–	–	–	–	–	–	
Va.	48,401	X	–	–	–	–	–	–	–	–	–	–	–	–	
W.Va.	27,708	X	–	–	–	–	X	–	–	–	–	–	–	–	
East South Central	**190,654**														
Ala.	90,281	X	–	–	–	–	X	–	X	–	–	–	–	–	
Ky.	44,326	X	–	X	–	–	–	–	–	–	–	–	–	–	
Miss.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Tenn.	56,047	X	–	–	–	–	–	–	–	–	–	–	–	–	
West South Central	**254,468**														
Ark.	23,371	X	–	–	–	X	–	–	–	–	–	–	–	–	
La.	7	X	–	–	–	–	–	–	–	–	–	–	–	–	
Okla.	43,490	X	X	–	–	–	–	–	–	–	–	–	–	–	
Tax.	187,600	X	–	–	–	–	–	–	–	–	–	–	–	–	
Mountain	**58,700**														
Ariz.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Colo.	14,985	X	–	–	–	–	–	–	–	–	–	–	–	–	
Ida.	5,738*	X	–	–	–	–	–	–	–	–	–	–	–	–	
Mont.	–*	–	–	–	–	–	–	–	–	–	–	–	–	–	
Nev.	17,776	X	–	–	–	–	–	–	–	–	–	–	–	–	
N.M.	20,201	X	–	–	–	–	–	–	–	–	–	–	–	–	
Utah	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Wyo.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Pacific	**192,560**														
Alaska	–*	–	–	–	–	–	–	–	–	–	–	–	–	–	
Cal.	152	X	–	–	–	–	–	–	–	–	–	–	–	–	
Hawaii	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Ore.	156,310*	X	X	X	X	X	X	X	X	–	–	–	–	–	
Wash	36,098	X	–	–	–	–	–	–	–	–	–	–	–	–	
Territories															
Guam	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
P.R.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
V.I.															

*Oregon State Laboratory serves as region metabolic testing center for the states of Alaska (8,033 tests), Idaho (17,152 tests), and Montana (14,427 tests).

Table 4-34
VII. CLINICAL CHEMISTRY
D. Multiphasic Screening

Lab & Region	Number of Specimens	Procedures Used				
		Single or Discrete Analyz.	2 Channel Anal.	3-6 Channel Anal.	7-12 Channel Anal.	12 Channel Anal.
Total	**244,780**					
Average	24,478					
New England	**12,660**					
Conn.	7,770	X	X	X	–	–
Mass.	–	–	–	–	–	–
Me.	–	–	–	–	–	–
N.H.	4,890	X	–	–	–	–
R.I.	–	–	–	–	–	–
Vt.	–	–	–	–	–	–
Middle Atlantic	**1,560**					
N.J.	–	–	–	–	–	–
N.Y.	1,560	–	–	X	–	–
Pa.						
East North Central	**36,108**					
Ill.	–	–	–	–	–	–
Ind.	–	–	–	–	–	–
Mich.	–	–	–	–	–	–
Ohio	9,579	X	–	–	X	–
Wisc.	26,529	–	–	X	–	–
West North Central	–					
Ia.	–	–	–	–	–	–
Kans.	–	–	–	–	–	–
Minn.	–	–	–	–	–	–
Mo.	–	–	–	–	–	–
Nebr.	–	–	–	–	–	–
N.D.	–	–	–	–	–	–
S.D.	–	–	–	–	–	–
South Atlantic	**185,903**					
Del.	–	–	–	–	–	–
D.C.	–	–	–	–	–	–
Fla.	129,690	–	X	–	–	–
Ga.	–	–	–	–	–	–
Md.	–	–	–	–	–	–
N.C.	38,047	–	–	X	X	–
S.C.	13,112	X	–	–	–	–
Va.	–	–	–	–	–	–
W.Va.	5,054	–	–	–	X	–
East South Central	**8,549**					
Ala.	–	–	–	–	–	
Ky.	–	–	–	–	–	
Miss.	8,549	–	–	X	–	–
Tenn.	–	–	–	–	–	–
West South Central						
Ark.	–	–	–	–	–	–
La.	–	–	–	–	–	–
Okla.	–	–	–	–	–	–
Tex.	–	–	–	–	–	–
Mountain						
Ariz.	–	–	–	–	–	–
Colo.	–	–	–	–	–	–
Ida.	–	–	–	–	–	–
Mont.	–	–	–	–	–	–
Nev.	–	–	–	–	–	–
N.M.	–	–	–	–	–	–
Utah	–	–	–	–	–	–
Wyo.	–	–	–	–	–	–
Pacific						
Alaska	–	–	–	–	–	–
Cal.	–	–	–	–	–	–
Hawaii	–	–	–	–	–	–
Ore.	–	–	–	–	–	–
Wash.	–	–	–	–	–	–
Territories						
Guam	–	–	–	–	–	–
P.R.	–	–	–	–	–	–
V.I.						

Table 4-35
VII. CLINICAL CHEMISTRY
E. Other Specimens

Lab & Region	Number of Specimens	Type – Procedures Used
Total	**46,309**	
Average	9,262	
La.	37,146	Blood – Hemoglobin Electrophoresis
Miss.	8,549	Electrolytes – Flame Photometer & Chloride Meter
Va.	445	Plasma – Serum – Fluorimetric Quan.
Wash.	98	Blood Lead – Atomic Absorption
Wisc.	71	Renal Calculi (Stones) – Qualitative

Table 4-36
VIII. PATHOLOGY

Lab & Region	Total Pathology Specimens	Exfoliative Cytology Specimens	Cytogenetics Specimens	Other Pathology Specimens	
				Number of Specimens	Types
Total	**537,541**	**519,451**	**4,110**	**13,980**	
Average	38,396	43,288	1,027	3,495	
New England	**466**	**466**	**–**	**–**	
Conn.	466	466	–	–	
Mass.	–	–	–	–	
Me.	–	–	–	–	
N.H.	–	–	–	–	
R.I.	–	–	–	–	
Vt.	–	–	–	–	
Middle Atlantic	**14,523**	**11,869**	**2,598**	**56**	
N.J.	9	–	–	9	Encephalitis Specimens
N.Y.	14,514	11,869	2,598	47	Electron Microscopy Specimens
Pa.					
East North Central	**145,645**	**130,641**	**1,115**	**13,889**	
Ill.	–	–	–	–	
Ind.	–	–	–	–	
Mich.	–	–	–	–	
Ohio	–	–	–	–	
Wisc.	145,645	130,641	1,115	13,889	Surgical Pathology
West North Central	**175**	**–**	**175**	**–**	
Ia.	–	–	–	–	
Kans.	–	–	–	–	
Minn.	175	–	175	–	
Mo.	–	–	–	–	
Nebr.	–	–	–	–	
N.D.	–	–	–	–	
S.D.	–	–	–	–	
South Atlantic	**359,465**	**359,465**	**–**	**–**	
Del.	46,775	46,775	–	–	
D.C.	20,615	20,615	–	–	
Fla.	–	–	–	–	
Ga.	–	–	–	–	
Md.	76,361	76,361	–	–	
N.C.	174,768	174,768	–	–	
S.C.	3,030	3,030	–	–	
Va.	–	–	–	–	
W.Va.	37,916	37,916	–	–	
East South Central	**11,909**	**11,909**	**–**	**–**	
Ala.	11,909	11,909	–	–	
Ky.	–	–	–	–	
Miss.	–	–	–	–	
Tenn.	–	–	–	–	
West South Central	**4,065**	**4,065**	**–**	**–**	
Ark.	–	–	–	–	
La.	4,065	4,065	–	–	
Okla.	–	–	–	–	
Tex.	–	–	–	–	
Mountain	**1,293**	**1,036**	**222**	**35**	
Ariz.	–	–	–	–	
Colo.	–	–	–	–	
Ida.	1,293	1,036	222	35	Buccal Smears
Mont.	–	–	–	–	
Nev.	–	–	–	–	
N.M.	–	–	–	–	
Utah	–	–	–	–	
Wyo.	–	–	–	–	
Pacific	**–**	**–**	**–**	**–**	
Alaska	–	–	–	–	
Cal.	–	–	–	–	
Hawaii	–	–	–	–	
Ore.	–	–	–	–	
Wash.	–	–	–	–	
Territories	**–**	**–**	**–**	**–**	
Guam	–	–	–	–	
P.R.	–	–	–	–	
V.I.					

Table 4-37

IX. ENVIRONMENTAL MICROBIOLOGY

Summary of Samples by Category and Sub-Category

Lab & Region	Total Environmental Microbiology	A Water Samples	B Dairy Product Samples	C Food and Beverage Samples	D Other Micro. Samples
Total	**2,524,798**	**2,010,604**	**458,047**	**47,806**	**8,341**
Average	50,496	42,779	12,724	1,039	695
New England	**95,503**	**65,636**	**23,675**	**5,979**	**213**
Conn.	26,579	13,174	12,271	1,068	66
Mass.	75	–	–	75	–
Me.	22,381	22,288	–	–	93
N.H.	–	–	–	–	–
R.I.	21,533	5,445	11,404	4,630	54
Vt.	24,935	24,729	–	206	–
Middle Atlantic	**66,714**	**63,776**	**2,576**	**362**	**–**
N.J.	18,606	16,313	2,116	177	–
N.Y.	48,108	47,463	460	185	–
Pa.					
East North Central	**348,208**	**310,293**	**28,980**	**6,934**	**2,001**
Ill.	65,008	48,267	14,939	1,802	–
Ind.	53,773	41,357	7,487	2,928	2,001
Mich.	90,740	83,325	6,511	904	–
Ohio	71,736	71,072	43	621	–
Wisc.	66,951	66,272	–	679	–
West North Central	**218,504**	**200,099**	**12,563**	**4,511**	**1,331**
Ia.	39,883	38,366	1,454	63	–
Kans.	45,523	45,460	–	63	–
Minn.	–	–	–	–	–
Mo.	70,640	65,687	1,647	3,306	–
Nebr.	21,824	21,824	–	–	–
N.D.	21,177	10,051	8,745	1,050	1,331
S.D.	19,457	18,711	717	29	–
South Atlantic	**467,766**	**413,281**	**45,522**	**8,963**	**–**
Del.	10,299	8,941	1,003	355	–
D.C.	1,783	752	222	809	–
Fla.	221,285	208,092	9,876	3,317	–
Ga.	101	–	–	101	–
Md.	85,263	69,504	14,025	1,734	–
N.C.	48,766	48,766	–	–	–
S.C.	12,569	–	11,977	592	–
Va.	59,879	53,203	4,774	1,902	–
W.Va.	27,821	24,023	3,645	153	–
East South Central	**305,991**	**205,971**	**93,961**	**6,015**	**44**
Ala.	111,756	67,463	42,297	1,952	44
Ky.	37,756	28,652	8,619	485	–
Miss.	62,963	38,913	23,633	417	–
Tenn.	93,516	70,943	19,412	3,161	–
West South Central	**701,513**	**475,613**	**221,138**	**3,027**	**1,735**
Ark.	56,771	49,823	5,757	1,161	30
La.	173,814	45,578	125,794	758	1,684
Okla.	68,204	58,039	9,738	427	–
Tex.	402,724	322,173	79,849	681	21
Mountain	**210,923**	**185,802**	**22,057**	**3,064**	**–**
Ariz.	46,994	39,962	6,642	390	–
Colo.	25,196	20,423	4,440	333	–
Ida.	34,624	29,579	4,514	531	–
Mont.	14,847	14,674	–	173	–
Nev.	25,000	20,636	3,923	441	–
N.M.	26,276	23,232	2,538	506	–
Utah	28,627	27,937	–	690	–
Wyo.	9,359	9,359	–	–	–
Pacific	**88,623**	**82,934**	**2,993**	**2,405**	**291**
Alaska	12,496	12,299	–	197	–
Cal.	15,259	14,125	372	500	262
Hawaii	9,696	6,751	2,621	324	–
Ore.	41,054	40,962	–	63	29
Wash.	10,118	8,797	–	1,321	–
Territories	**21,053**	**7,199**	**4,582**	**6,546**	**2,726**
Guam	419	285	95	39	–
P.R.	20,634	6,914	4,487	6,507	2,726
V.I.					

Table 4-38

IX. ENVIRONMENTAL MICROBIOLOGY

A. Water Samples (F = Membrane Filter, T = Multiple Tube, O = Other)

Lab & Region	Number of Samples	Type & Procedure			
		Potable	Non-Potable	Swimming Pools	Sewage & Waste
TOTAL	**2,010,604**				
Average	42,779				
New England	**65,636**				
Conn.	13,174	F-T-O	F-T-O	F-T-O	F-T
Mass.	–	–	–	–	–
Me.	22,288	F	F-T	F	F-T
N.H.	–	–	–	–	–
R.I.	5,445	F	F	F-O	F
Vt.	24,729	F	–	F	–
Middle Atlantic	**63,776**				
N.J.	16,313	F	T	–	T
N.Y.	47,463	F	F	F	F
Pa.					
East North Central	**310,293**				
Ill.	48,267	F-T	F-T	F-T	F-T
Ind.	41,357	F-T-O	F-T	T-O	F-T
Mich.	83,325	F	F	F	F
Ohio	71,072	F-T	F	F	F
Wisc.	66,272	F-T	F-T	F-T	F-T
West North Central	**200,099**				
Ia.	38,366	T	F	T	–
Kans.	45,460	F	F	F	F
Minn.	–	–	–	–	–
Mo.	65,687	F	F-T-O	F	–
Nebr.	21,824	F-T	–	–	–
N.D.	10,051	F-T	T	O	T
S.D.	18,711	F-T	F-T	T	F
South Atlantic	**413,281**				
Del.	8,941	F-T	T	F	–
D.C.	752	F	T	–	–
Fla.	208,092	F-T	T	F	T
Ga.	–	–	–	–	–
Md.	69,504	F	T	T	T
N.C.	48,766	F-T	F-T	–	–
S.C.	–	–	–	–	–
Va.	53,203	F-T-O	F-T-O	F	F-T-O
W.Va.	24,023	F-T	F-T	T	F-T
East South Central	**205,971**				
Ala.	67,463	F-T	F-T	F-T	T
Ky.	28,652	F-T-O	T-O	–	–
Miss.	38,913	F-T	T	–	–
Tenn.	70,943	F-T	F	F	–
West South Central	**475,613**				
Ark.	49,823	F-T	F-T	F-T	–
La.	45,578	F-T-O	O	F-T	T
Okla.	58,039	F-T	F	F	F
Tex.	322,173	F-T	F-T	F-T	–
Mountain	**185,802**				
Ariz.	39,962	F-T-O	F-T-O	T-O	F-T-O
Colo.	20,423	F-T	T	–	T
Ida.	29,579	F-T	F	F	F-T
Mont.	14,674	T	F	F	F-T
Nev.	20,636	F-T	F-T	F-T	F-T
N.M.	23,232	F	F-T	F-T	T
Utah	27,937	F-T	F-T	F-T	T
Wyo.	9,359	F	F	F	–
Pacific	**82,934**				
Alaska	12,299	F-T	F-T	T	T
Cal.	14,125	F-T	T	T	T
Hawaii	6,751	F-T	F-T	T	T
Ore.	40,962	T	T	T	–
Wash.	8,797	F-T	T	T	–
Territories	**7,199**				
Guam	285	F-T	O	T	O
P.R.	6,914	F-T-O	T-O	T	–
V.I.					

Table 4-39
IX. ENVIRONMENTAL MICROBIOLOGY
B. Dairy Product Samples

Lab & Region	Number of Samples	Types of Samples					Other
		Milk & Cream	Ice Cream	Cheese	Other Dairy Products	Frozen Desserts	
Total	**458,047**						
Average	12,724						
New England	**23,675**						
Conn.	12,271	X	X	X	X	X	
Mass.	–	–	–	–	–	–	
Me.	–	–	–	–	–	–	
N.H.	–	–	–	–	–	–	
R.I.	11,404	X	X	X	X	–	
Vt.							
Middle Atlantic	**2,576**						
N.J.	2,116	X	X	X	X	X	
N.Y.	460	X	–	–	X	–	
Pa.							
East North Central	**28,980**						
Ill.	14,939	X	X	X	X	X	
Ind.	7,487	X	X	X	X	–	
Mich.	6,511	X	X	X	X	–	
Ohio	43	X	–	–	–	–	
Wisc.	–	–	–	–	–	–	
West North Central	**12,563**						
Ia.	1,454	X	X	–	X	X	Cultured Products
Kans.	–	–	–	–	–	–	
Minn.	–	–	–	–	–	–	
Mo.	1,647	X	X	X	–	X	Containers
Nebr.	–	–	–	–	–	–	
N.D.	8,745	X	X	X	–	X	
S.D.	717	X	–	–	X	–	
South Atlantic	**45,522**						
Del.	1,003	X	X	–	X	–	
D.C.	222	X	X	–	–	–	
Fla.	9,876	X	X	X	X	X	
Ga.	–	–	–	–	–	–	
Md.	14,025	X	X	–	X	X	
N.C.	–	–	–	–	–	–	
S.C.	11,977	X	X	–	X	X	Milk Cartons, Rinse Tests
Va.	4,774	X	X	–	X	X	Counter Freezes
W.Va.	3,645	X	–	–	X	–	
East South Central	**93,961**						
Ala.	42,297	X	X	X	X	X	Cartons
Ky.	8,619	X	X	X	X	–	
Miss.	23,633	X	–	–	X	–	
Tenn.	19,412	X	X	X	X	X	
West South Central	**221,138**						
Ark.	5,757	X	X	X	X	X	Butter, Goat Milk
La.	125,794	X	X	X	X	X	Powdered Milk, Non-dairy Products
Okla.	9,738	X	–	–	–	–	
Tex.	79,849	X	X	–	–	–	
Mountain	**22,057**						
Ariz.	6,642	X	X	–	X	X	
Colo.	4,440	X	X	–	X	–	
Ida.	4,514	X	–	–	–	–	
Mont.	–	–	–	–	–	–	
Nev.	3,923	X	X	X	X	X	
N.M.	2,538	X	X	–	X	X	
Utah	–	–	–	–	–	–	
Wyo.	–	–	–	–	–	–	
Pacific	**2,993**						
Alaska	–	–	–	–	–	–	
Cal.	372	X	–	–	–	–	
Hawaii	2,621	X	X	X	X	X	
Ore.	–	–	–	–	–	–	
Wash.	–	–	–	–	–	–	
Territories	**4,582**						
Guam	95	X	–	–	–	–	
P.R.	4,487	X	X	X	X	X	Baby Formulas, Culture Products
V.I.							

Table 4-40
IX. ENVIRONMENTAL MICROBIOLOGY

Lab & Region	C. Food And Beverage Samples Types					D. Other Samples	
	Number of Samples	Food Quality	Food-Associated Disease Outbreaks	Seafood	Environmental	Number of Samples	Other
Total	**47,806**					**8,341**	
Average	1,039					695	
New England	**5,979**					**213**	
Conn.	1,068	X	X	X	X	66	Bovine Serum for Q Fever
Mass.	75	–	X	–	–	–	
Me.	–	–	–	–	–	93	Toys – Stuffing, Sanitary Control
N.H.	–	–	–	–	–	–	
R.I.	4,630	X	X	X	X	54	Paralytic Shellfish Poisoning
Vt.	206	–	–	–	X	–	
Middle Atlantic	**362**					–	
N.J.	177	X	X	–	–	–	
N.Y.	185	X	–	–	X	–	
Pa.							
East North Central	**6,934**					**2,001**	
Ill.	1,802	X	X	X	X	–	
Ind.	2,928	X	X	X	–	2,001	Meat Products
Mich.	904	–	X	–	X	–	
Ohio	621	X	X	–	X	–	
Wisc.	679	–	X	–	X	–	
West North Central	**4,511**					**1,331**	
Ia.	63	–	X	–	–	–	
Kans.	63	X	X	–	–	–	
Minn.	–	–	–	–	–	–	
Mo.	3,306	X	X	–	X	–	
Nebr.	–	–	–	–	–	–	
N.D.	1,050	–	–	X	X	1,331	Bact. Spore Strips – Monitoring Hospital Autoclaves
S.D.	29	–	X	–	–	–	
South Atlantic	**7,061**						
Del.	355	X	X	X	X	–	
D.C.	809	X	–	X	–	–	
Fla.	3,317	X	X	X	X	–	
Ga.	101	–	X	–	–	–	
Md.	1,734	X	X	X	X	–	
N.C.	–	–	–	–	–	–	
S.C.	592	X	X	X	X	–	
Va.	–	–	–	–	–	–	
W.Va.	153	X	X	–	–	–	
East South Central	**6,015**					**44**	
Ala.	1,952	X	X	X	X	44	Spider, Lice, Mosquito
Ky.	485	X	X	–	X	–	
Miss.	417	–	X	X	X	–	
Tenn.	3,161	–	X	–	X	–	
West South Central	**3,027**					**1,735**	
Ark.	1,161	X	X	–	X	30	Antibiotic Residues in Meat
La.	758	X	X	X	X	1,684	Soft Drinks
Okla.	427	X	X	–	X	–	
Tex.	681	X	X	X	X	21	Lactobacillus Counts
Mountain	**2,558**					–	
Ariz.	390	X	X	–	–	–	
Colo.	333	X	X	–	X	–	
Ida.	531	–	X	–	X	–	
Mont.	173	X	X	–	–	–	
Nev.	441	X	X	–	–	–	
N.M.	–	–	–	–	–	–	
Utah	690	X	X	–	X	–	
Wyo.	–	–	–	–	–	–	
Pacific	**2,405**					**291**	
Alaska	197	X	X	X	X	–	
Cal.	500	–	–	X	X	262	Drug Surveillance
Hawaii	324	X	X	X	X	–	
Ore.	63	–	X	X	–	29	Shellfish Toxicity Bioassay
Wash.	1,321	X	X	X	X	–	
Territories	**6,546**					**2,726**	
Guam	39	X	X	–	X	–	
P.R.	6,507	X	X	X	X	2,726	Containers, PT Test, Control Test
V.I.							

Table 4-41
X. ENVIRONMENTAL CHEMISTRY
Samples by Category and Sub-Category

Lab & Region	Total Envir. Chem. Samples	A Water Samples	B Dairy Prod. and Food Samples	C Pesticide Samples	D Air Pollution Samples	E Radiological Samples	F Other Samples
Total	**733,365**	**385,194**	**123,714**	**30,570**	**157,558**	**29,350**	**6,979**
Average	16,667	9,630	4,124	1,019	7,503	1,398	634
New England	**101,498**	**53,899**	**21,632**	**365**	**22,766**	**2,392**	**444**
Conn.	25,714	12,920	5,061	71	5,568	1,650	444
Mass.	—	—	—	—	—	—	—
Me.	11,855	11,514	—	—	—	341	—
N.H.	—	—	—	—	—	—	—
R.I.	39,909	5,445	16,571	294	17,198	401	—
Vt.	24,020	24,020	—	—	—	—	—
Middle Atlantic	**52,657**	**27,255**	**2,367**	**1,432**	**17,834**	**3,760**	**9**
N.J.	15,244	12,137	2,367	740	—	—	—
N.Y.	37,413	15,118	—	692	17,834	3,760	9
Pa.							
East North Central	**119,856**	**80,925**	**12,476**	**8,719**	**11,226**	**3,326**	**3,184**
Ill.	29,881	22,835	2,364	3,189	—	1,493	—
Ind.	24,622	11,038	10,112	3,472	—	—	—
Mich.	18,530	15,217	—	632	—	—	2,681
Ohio	15,616	10,667	—	740	3,089	617	503
Wisc.	31,207	21,168	—	686	8,137	1,216	—
West North Central	**76,611**	**49,050**	**4,242**	**1,825**	**16,948**	**4,386**	**160**
Ia.	25,007	19,174	—	285	3,198	2,350	—
Kans.	16,782	7,408	—	446	8,382	546	—
Minn.	—	—	—	—	—	—	—
Mo.	8,811	2,950	4,242	1,082	—	537	—
Nebr.	10,259	10,259	—	—	—	—	—
N.D.	8,464	3,447	—	—	4,064	953	—
S.D.	7,288	5,812	—	12	1,304	—	160
South Atlantic	**134,370**	**61,997**	**31,462**	**10,731**	**24,731**	**4,600**	**849**
Del.	3,219	3,219	—	—	—	—	—
D.C.	665	169	143	—	—	—	353
Fla.	5,188	4,545	220	30	366	—	27
Ga.	—	—	—	—	—	—	—
Md.	47,432	16,913	13,810	989	13,365	1,886	469
N.C.	16,272	14,212	—	326	—	1,734	—
S.C.	13,096	—	12,193	903	—	—	—
Va.	48,498	22,939	5,096	8,483	11,000	980	—
W.Va	—	—	—	—	—	—	—
East South Central	**66,640**	**49,232**	**16,277**	**1,131**	**—**	**—**	**—**
Ala.	54,896	39,468	15,428	—	—	—	—
Ky.	10,124	8,144	849	1,131	—	—	—
Miss.	1,620	1,620	—	—	—	—	—
Tenn.	—	—	—	—	—	—	—
West South Central	**36,036**	**15,356**	**16,554**	**952**	**—**	**2,264**	**910**
Ark.	2,693	—	2,693	—	—	—	—
La.	9,491	2,456	6,763	264	—	8	—
Okla.	5,528	—	5,528	—	—	—	—
Tex.	18,324	12,900	1,570	688	—	2,256	910
Mountain	**84,802**	**34,936**	**6,444**	**3,238**	**34,745**	**5,330**	**109**
Ariz.	5,980	2,052	232	1,258	2,438	—	—
Colo.	31,711	6,170	1,980	393	18,228	4,940	—
Ida.	11,611	5,592	1,519	1,025	3,475	—	—
Mont.	5,850	2,867	137	5	2,668	173	—
Nev.	7,807	3,394	2,531	—	1,882	—	—
N.M.	12,306	6,392	20	168	5,617	—	109
Utah	9,537	8,469	25	389	437	217	—
Wyo.	—	—	—	—	—	—	—
Pacific	**53,221**	**10,288**	**6,842**	**2,177**	**29,308**	**3,292**	**1,314**
Alaska	1,308	1,054	254	—	—	—	—
Cal.	18,813	6,864	4,212	450	3,791	2,182	1,314
Hawaii	29,447	1,466	2,373	91	25,517	—	—
Ore.	—	—	—	—	—	—	—
Wash.	3,653	904	3	1,636	—	1,110	—
Territories	**7,674**	**2,256**	**5,418**	**—**	**—**	**—**	**—**
Guam	8	—	8	—	—	—	—
P.R.	7,666	2,256	5,410	—	—	—	—
V.I.							

Table 4-42
X. ENVIRONMENTAL CHEMISTRY

Lab & Region	Number of Samples	A. Water Samples				B. Dairy Products and Food Samples		
		Types				Number of Samples	Types	
		Potable	Non-Potable	Swimming Pools	Sewage & Waste		Milk & Cream	Foods
Total	**385,194**					**123,714**		
Average	9,630					4,124		
New England	**53,899**					**21,632**		
Conn.	12,920	X	X	X	X	5,061	X	X
Mass.	–	–	–	–	–	–	–	–
Me.	11,514	X	X	–	X	–	–	–
N.H.	–	–	–	–	–	–	–	–
R.I.	5,445	X	X	X	X	16,571	X	X
Vt.	24,020	X	–	–	–	–	–	–
Middle Atlantic	**27,255**					**2,367**		
N.J.	12,137	X	X	–	X	2,367	X	X
N.Y.	15,118	X	X	X	X	–	–	–
Pa.								
East North Central	**80,925**					**12,476**		
Ill.	22,835	X	X	X	X	2,364	X	X
Ind.	11,038	X	X	–	X	10,112	X	X
Mich.	15,217	X	X	–	X	–	–	–
Ohio	10,667	X	X	X	X	–	–	–
Wisc.	21,168	X	X	–	X	–	–	–
West North Central	**49,050**					**4,242**		
Ia.	19,174	X	X	–	X	–	–	–
Kans.	7,408	X	X	X	X	–	–	–
Minn.	–	–	–	–	–	–	–	–
Mo.	2,950	X	X	–	–	4,242	X	X
Nebr.	10,259	X	–	–	–	–	–	–
N.D.	3,447	X	X	–	X	–	–	–
S.D.	5,812	X	X	–	X	–	–	–
South Atlantic	**61,997**					**31,462**		
Del.	3,219	X	–	–	–	–	–	–
D.C.	169	X	–	–	–	143	X	X
Fla.	4,545	X	X	–	–	220	–	X
Ga.	–	–	–	–	–	–	–	–
Md.	16,913	X	X	X	X	13,810	X	X
N.C.	14,212	X	X	–	X	–	–	–
S.C.	–	–	–	–	–	12,193	X	X
Va.	22,939	X	X	–	X	5,096	X	X
W.Va.	–	–	–	–	–	–	–	–
East South Central	**49,232**					**16,277**		
Ala.	39,468	X	X	X	X	15,428	X	X
Ky.	8,144	X	X	X	–	849	X	X
Miss.	1,620	X	X	–	–	–	–	–
Tenn.	–	–	–	–	–	–	–	–
West South Central	**15,356**					**16,554**		
Ark.	–	–	–	–	–	2,693	X	–
La.	2,456	X	X	–	X	6,763	X	X
Okla.	–	–	–	–	–	5,528	X	X
Tex.	12,900	X	X	–	X	1,570	X	X
Mountain	**34,936**					**6,444**		
Ariz.	2,052	X	X	X	X	232	X	X
Colo.	6,170	X	X	–	X	1,980	X	X
Ida.	5,592	X	X	X	X	1,519	X	X
Mont.	2,867	X	X	–	X	137	–	X
Nev.	3,394	X	X	X	X	2,531	X	X
N.M.	6,392	X	X	X	X	20	–	X
Utah	8,469	X	X	X	X	25	–	X
Wyo.	–	–	–	–	–	–	–	–
Pacific	**10,288**					**6,842**		
Alaska	1,054	X	X	X	X	254	–	X
Cal.	6,864	X	X	X	X	4,212	X	X
Hawaii	1,466	X	X	–	X	2,373	X	X
Ore.	–	–	–	–	–	–	–	–
Wash.	904	X	X	X	X	3		X
Territories	**2,256**					**5,418**		
Guam	–	–	–	–	–	8	X	–
P.R.	2,256	X	–	–	–	5,410	X	X
V.I.								

Table 4-43
X. ENVIRONMENTAL CHEMISTRY
C. Pesticide Samples

Lab & Region	Number of Samples	Types				Other
		Human Source	Water	Milk	Foods	
Total	**30,570**					
Average	1,019					
New England	**365**					
Conn.	71	—	X	X	X	Fish & Shellfish
Mass.	—	—	—	—	—	
Me.	—	—	—	—	—	
N.H.	—	—	—	—	—	
R.I.	294	—	X	X	—	
Vt.	—	—	—	—	—	
Middle Atlantic	**1,432**					
N.J.	740	X	X	X	X	Air, House Dust, Animals, Fish, Soil
N.Y.	692	—	X	—	—	Sediments
Pa.						
East North Central	**8,719**					
Ill.	3,189	—	X	X	X	Fat
Ind.	3,472	X	X	X	X	
Mich.	632	X	X	—	—	
Ohio	740	—	X	—	X	
Wisc.	686	—	X	—	—	Effluents
West North Central	**1,825**					
Ia.	285	X	X	—	—	Silt, Air, Fish
Kans.	446	X	X	—	X	Fish, Soil
Minn.	—	—	—	—	—	
Mo.	1,082	—	X	—	X	
Nebr.	—	—	—	—	—	
N.D.	—	—	—	—	—	
S.D.	12	X	—	—	—	
South Atlantic	**10,731**					
Del.	—	—	—	—	—	
D.C.	—	—	—	—	—	
Fla.	30	—	X	—	X	
Ga.	—	—	—	—	—	
Md.	989	—	X	X	X	Seafood
N.C.	326	X	X	—	—	
S.C.	903	X	X	X	X	Animal Sources
Va.	8,483	X	X	X	X	Soils, Feeds, Animal Tissues
W.Va.	—	—	—	—	—	
East South Central	**1,131**					
Ala.	—	—	—	—	—	
Ky.	1,131	X	X	X	X	
Miss.	—	—	—	—	—	
Tenn.	—	—	—	—	—	
West South Central	**952**					
Ark.	—	—	—	—	—	
La.	264	—	X	X	X	
Okla.	—	—	—	—	—	
Tex.	688	—	X	X	X	
Mountain	**3,238**					
Ariz.	1,258	—	X	X	X	Fish
Colo.	393	—	X	X	X	
Ida.	1,025	X	X	X	X	
Mont.	5	—	X	—	—	Vegetation
Nev.	—	—	—	—	—	
N.M.	168	—	X	X	—	Soils
Utah	389	X	X	X	—	Various Animals — Fish, Bees, Birds, etc.
Wyo.	—	—	—	—	—	
Pacific	**2,177**					
Alaska	—	—	—	—	—	
Cal.	450	—	X	—	X	Wastewater
Hawaii	91	—	X	X	X	
Ore.	—	—	—	—	—	
Wash.	1,636	X	X	X	X	Wildlife, Air, Botanical
Territories						
Guam	—	—	—	—	—	
P.R.	—	—	—	—	—	
V.I.						

Table 4-44
X. ENVIRONMENTAL CHEMISTRY
D. Air Pollution Samples

Lab & Region	Number of Samples	Types of Activity							
		Discrete Sampling Stations							Number Continuous Samp. Stations
		Number of Stations	Particulate				Gaseous	Other	
			Solids	Metals	Organics	Other			
Total	**157,558**	**1,200**							**110**
Average	7,503	66.7							6.1
New England	**22,766**	**62**							**25**
Conn.	5,568	50	X	X	X	X	X	X	21
Mass.	–	–	–	–	–	–	–	–	–
Me.	–	–	–	–	–	–	–	–	–
N.H.	–	–	–	–	–	–	–	–	–
R.I.	17,198	12	X	X	X	X	X	–	4
Vt.	–	–	–	–	–	–	–	–	–
Middle Atlantic	**17,834**	**328**							**14**
N.J.	–	–	–	–	–	–	–	–	–
N.Y.	17,834	328	X	X	X	X	X	–	14
Pa.									
East North Central	**11,226**	**80**							
Ill.	–	–	–	–	–	–	–	–	–
Ind.	–	–	–	–	–	–	–	–	–
Mich.	–	–	–	–	–	–	–	–	–
Ohio	3,089	80	X	X	X	X	X	–	–
Wisc.	8,137	–	X	X	–	X	X	X	–
West North Central	**16,948**	**130**							**21**
Ia.	3,198	72	X	–	–	–	X	–	16
Kans.	8,382	–	X	X	–	–	X	–	–
Minn.	–	–	–	–	–	–	–	–	–
Mo.	–	–	–	–	–	–	–	–	–
Nebr.	–	–	–	–	–	–	–	–	–
N.D.	4,064	37	X	X	–	–	X	X	5
S.D.	1,304	21	X	–	–	–	X	–	–
South Atlantic	**24,731**	**267**							**25**
Del.	–	–	–	–	–	–	–	–	–
D.C.	–	–	–	–	–	–	–	–	–
Fla.	366	1	X	–	–	–	–	–	–
Ga.	–	–	–	–	–	–	–	–	–
Md.	13,365	84	X	X	X	–	X	X	–
N.C.	–	–	–	–	–	–	–	–	–
S.C.	–	–	–	–	–	–	–	–	–
Va.	11,000	182	X	–	–	–	X	X	25
W.Va.	–	–	–	–	–	–	–	–	–
East South Central									
Ala.	–	–	–	–	–	–	–	–	–
Ky.	–	–	–	–	–	–	–	–	–
Miss.	–	–	–	–	–	–	–	–	–
Tenn.	–	–	–	–	–	–	–	–	–
West South Central									
Ark.	–	–	–	–	–	–	–	–	–
La.	–	–	–	–	–	–	–	–	–
Okla.	–	–	–	–	–	–	–	–	–
Tex.	–	–	–	–	–	–	–	–	–
Mountain	**34,745**	**265**							**22**
Ariz.	2,438	39	X	X	X	X	X	X	14
Colo.	18,228	76	X	X	X	–	–	–	8
Ida.	3,475	–	X	X	–	X	X	X	–
Mont.	2,668	64	X	X	–	X	X	X	–
Nev.	1,882	17	X	X	X	–	X	–	–
N.M.	5,617	66	X	X	X	X	X	X	–
Utah	437	3	–	X	–	–	–	–	–
Wyo.	–	–	–	–	–	–	–	–	–
Pacific	**29,308**	**68**							**3**
Alaska	–	–	–	–	–	–	–	–	–
Cal.	3,791	50	X	X	X	–	X	X	–
Hawaii	25,517	18	X	–	–	–	X	X	3
Ore.	–	–	–	–	–	–	–	–	–
Wash.	–	–	–	–	–	–	–	–	–
Territories									
Guam	–	–	–	–	–	–	–	–	–
P.R.	–	–	–	–	–	–	–	–	–
V.I.									

Table 4-45
X. ENVIRONMENTAL CHEMISTRY
E. Radiological Analysis

Lab & Region	Number of Samples	Types							
		Air	Water	Milk	Food	Silt	Soil	Wipes	Other
Total	**29,350**								
Average	1,398								
New England	**2,392**								
Conn.	1,650	X	X	X	X	X	X	X	Fish and Shellfish, Stack Effluent and Nuclear Power Plants
Mass.	—	—	—	—	—	—	—	—	
Me.	341	X	X	X	X	X	X	—	
N.H.	—	—	—	—	—	—	—	—	
R.I.	401	X	X	X	X	—	—	—	
Vt.	—	—	—	—	—	—	—	—	
Middle Atlantic	**3,760**								
N.J.	—	—	—	—	—	—	—	—	
N.Y.	3,760	X	X	X	X	X	X	X	Gas (Whole Air) (Stack Effluents)
Pa.									
East North Central	**3,326**								
Ill.	1,493	X	X	X	X	—	—	X	
Ind.	—	—	—	—	—	—	—	—	
Mich.	—	—	—	—	—	—	—	—	
Ohio	617	—	X	X	—	—	—	—	
Wisc.	1,216	X	X	X	—	—	X	—	
West North Central	**4,386**								
Ia.	2,350	X	X	X	—	—	—	—	
Kans.	546	X	X	X	X	—	X	X	EPA Quality Assurance Samples
Minn.	—	—	—	—	—	—	—	—	
Mo.	537	—	X	—	—	—	—	—	
Nebr.	—	—	—	—	—	—	—	—	
N.D.	953	—	X	—	—	—	—	X	
S.D.	—	—	—	—	—	—	—	—	
South Atlantic	**4,600**								
Del.	—	—	—	—	—	—	—	—	
D.C.	—	—	—	—	—	—	—	—	
Fla.	—	—	—	—	—	—	—	—	
Ga.	—	—	—	—	—	—	—	—	
Md.	1,886	X	X	X	X	X	X	X	
N.C.	1,734	X	X	X	X	X	X	X	
S.C.	—	—	—	—	—	—	—	—	
Va.	980	X	X	X	—	—	X	X	Tissue
W.Va.	—	—	—	—	—	—	—	—	
East South Central									
Ala.	—	—	—	—	—	—	—	—	
Ky.	—	—	—	—	—	—	—	—	
Miss.	—	—	—	—	—	—	—	—	
Tenn.	—	—	—	—	—	—	—	—	
West South Central	**2,264**								
Ark.	—	—	—	—	—	—	—	—	
La.	8	—	X	—	—	—	—	—	
Okla.	—	—	—	—	—	—	—	—	
Tex.	2,256	X	X	X	—	—	X	X	
Mountain	**5,330**								
Ariz.	—	—	—	—	—	—	—	—	
Colo.	4,940	X	X	—	—	—	X	—	
Ida.	—	—	—	—	—	—	—	—	
Mont.	173	—	X	—	—	—	—	—	
Nev.	—	—	—	—	—	—	—	—	
N.M.	—	—	—	—	—	—	—	—	
Utah	217	X	X	—	—	—	—	—	
Wyo.	—	—	—	—	—	—	—	—	
Pacific	**3,292**								
Alaska	—	—	—	—	—	—	—	—	
Cal.	2,182	X	X	X	X	X	X	X	Sewage, Occupational exposure
Hawaii	—	—	—	—	—	—	—	—	
Ore.	—	—	—	—	—	—	—	—	
Wash.	1,110	X	X	X	X	X	X	X	
Territories									
Guam	—	—	—	—	—	—	—	—	
P.R.	—	—	—	—	—	—	—	—	
V.I.									

Table 4-46
ENVIRONMENTAL CHEMISTRY
F. Other Samples

Lab & Region	Number of Samples	Types
Total	**6,979**	
Average	634	
Cal.	1,314	Air Monitoring Instrument Calibration Reid Vapor Pressure (Gasoline) Drugs, Cosmetics, and Hazardous Substances
Conn.	444	Fish Kills, Fish Skeletons, Asphalt, Mud, Ash, Rock Dust, Sand, Sediment, Soil, Serum, Urine, Toxicology, Samples, Oil, etc.
D.C.	353	Ground Meats
Fla.	27	Bedding
Md.	469	Bedding and Upholstery
Mich.	2,681	Human Fluids and Tissues for PBB and PCB
N.M.	109	Heavy Metals on/in Soils, Muds, etc.
N.Y.	9	Sediment Samples for Element Analysis
Ohio	503	Water – Organic
S.D.	160	Fish for Hg Analysis
Texas	910	PKU, Sediment, Analysis of Purchased Chemicals

Table 4-47
XI. OCCUPATIONAL HEALTH AND SAFETY

Lab & Region	Total Occup. Health & Safety Samples	Number of Environmental Samples	Number of Biological Samples
Total	**44,970**	**43,311**	**1,659**
Average	2,249	2,166	276
New England	**1,926**	**1,926**	**–**
Conn.	1,615	1,615	-
Mass.	–	–	–
Me.	12	12	–
N.H.	–	–	–
R.I.	299	299	–
Vt.	–	–	–
Middle Atlantic	**225**	**225**	**–**
N.J.	225	225	–
N.Y.	–	–	–
Pa.			
East North Central	**9,955**	**9,955**	**–**
Ill.	–	–	–
Ind.	–	–	–
Mich.	–	–	–
Ohio	4,262	4,262	–
Wisc.	5,693	5,693	–
West North Central	**2,338**	**1,666**	**672**
Ia.	1,652	980	672
Kans.	686	686	–
Minn.	–	–	–
Mo.	–	–	–
Nebr.	–	–	–
N.D.	–	–	–
S.D.	–	–	–
South Atlantic	**10,963**	**10,963**	**–**
Del.	–	–	–
D.C.	–	–	–
Fla.	994	994	–
Ga.	–	–	–
Md.	5,828	5,828	–
N.C.	3,841	3,841	–
S.C.	–	–	–
Va.	300	300	–
W.Va.	–	–	–
East South Central	**2,070**	**1,621**	**449**
Ala.	–	–	–
Ky.	2,070	1,621	449
Miss.	–	–	–
Tenn.	–	–	–
West South Central	**290**	**280**	**10**
Ark.	–	–	–
La.	–	–	–
Okla.	–	–	–
Tex.	290	280	10
Mountain	**8,035**	**7,509**	**526**
Ariz.	1,057	1,057	–
Colo.	4,436	4,436	–
Ida.	–	–	–
Mont.	120	97	23
Nev.	–	–	–
N.M.	30	30	–
Utah	2,392	1,889	503
Wyo.	–	–	–
Pacific	**9,168**	**9,166**	**2**
Alaska	–	–	–
Cal.	9,168	9,166	2
Hawaii	–	–	–
Ore.	–	–	–
Wash.	–	–	–
Territories	**–**	**–**	**–**
Guam	–	–	–
P.R.	–	–	–
V.I.			

Table 4-48
XII. TOXICOLOGY
SAMPLES BY CATEGORY AND SUB-CATEGORY

Lab & Region	Total Toxicology Samples	A Physical Samples	B Biological Samples
Total	**1,121,866**	**289,132**	**832,734**
Average	31,163	10,709	25,234
New England	**290,062**	**49,490**	**240,572**
Conn.	80,577	45,778	34,799
Mass.	171,993	520	171,473
Me.	13,241	813	12,428
N.H.	—	—	—
R.I.	20,935	2,379	18,556
Vt.	3,316	—	3,316
Middle Atlantic	**201,627**	**2,054**	**199,573**
N.J.	201,627	2,054	199,573
N.Y.	—	—	—
Pa.			
East North Central	**74,768**	**17,841**	**56,927**
Ill.	19,636	600	19,036
Ind.	3,619	3,619	—
Mich.	15,032	13,255	1,777
Ohio	17,893	307	17,586
Wisc.	18,588	60	18,528
West North Central	**30,015**	**5,291**	**24,724**
Ia.	5,848	378	5,470
Kans.	3,274	153	3,121
Minn.	—	—	—
Mo.	368	—	368
Nebr.	20,470	4,740	15,730
N.D.	55	20	35
S.D.	—	—	—
South Atlantic	**386,388**	**207,203**	**179,185**
Del.	1,963	—	1,963
D.C.	31,570	—	31,570
Fla.	23,215	25	23,190
Ga.	49,691	—	49,691
Md.	1,818	1,818	—
N.C.	1,405	28	1,377
S.C.	6,148	104	6,044
Va.	270,578	205,228	65,350
W.Va.	—	—	—
East South Central	**8,825**	**481**	**8,344**
Ala.	6,015	15	6,000
Ky.	2,810	466	2,344
Miss.	—	—	—
Tenn.	—	—	—
West South Central	**43,970**	**—**	**43,970**
Ark.	—	—	—
La.	—	—	—
Okla.	—	—	—
Tex.	43,970	—	43,970
Mountain	**75,460**	**6,689**	**68,771**
Ariz.	—	—	—
Colo.	43,691	—	43,691
Ida.	12,864	5,242	7,622
Mont.	2,736	47	2,689
Nev.	—	—	—
N.M.	9,812	—	9,812
Utah	3,817	1,400	2,417
Wyo.	2,540	—	2,540
Pacific	**10,751**	**83**	**10,668**
Alaska	160	65	95
Cal.	10,586	13	10,573
Hawaii	5	5	—
Ore.	—	—	—
Wash.	—	—	—
Territories			
Guam	—	—	—
P.R.	—	—	—
V.I.			

Table 4-49
XII. TOXICOLOGY
A. Physical Samples (F-Forensic, O-Other)

Lab & Region	Number of Samples	Types										
		Liquids for Alcohol	Pesticides	PCB's	Plant and Plant Material	Drugs and Narcotics	Articles for Blood Stains	Paint—Comparison	Paint—Lead	Fibers and Hairs	Gunpowder Residues	Other
Total	**289,132**											
Average	10,709											
Ala.	15	—	—	—	—	—	—	—	O	—	—	
Alaska	65	—	—	—	—	F/O	—	—	—	—	—	
Cal.	13	—	—	—	—	—	—	—	O	—	—	Mutagenic Screening by Ames Bioassay
Conn.	45,778	F	—	—	F	F	F	F	O	F		F/Clay, Sand, Concrete Fire Accelerants Clothing for Seminal Stains, etc.
Fla.	25	—	—	—	—	—	—	—	O	—	—	
Hawaii	5	—	—	—	—	O	—	—	O	—	—	
Ida.	5,242	F	—	—	F	F	F	F	F	F	F	F/Milk for PCB
Ill.	600	F/O	—	—	F/O	F/O	—	—	F	—	—	
Ind.	3,619	—	O	O	—	O	—	—	—	—	—	
Ia.	378	—	—	—	—	—	—	—	O	—	—	
Kans.	153	F	—	—	—	F/O	—	—	F	F/O	—	
Ky.	466	F/O	F/O	F/O	F	F	—	—	F	—	—	
Me.	813	F	O	O	F	F	—	—	F	—	—	F/Hydrocarbons
Md.	1,818	O	—	—	F	F/O	—	—	—	—	—	
Mass.	520	—	—	—	—	—	—	—	O	—	—	O/Soil-Lead
Mich.	13,255	F	—	—	F	F	F	F	—	F	—	Seminal Stains Saliva Stains Arson, Fire Hazard Fire Works, Explosive Residues, Sabotage Material Identification and Comparison
Mont.	47	—	—	—	F/O	F/O	—	—	O	—	—	
Nebr.	4,740	F/O	—	—	F/O	F/O	—	—	—	—	—	
N.J.	2,054	—	O	O	O	O	—	—	O	—	—	
N.C.	28	—	—	—	—	—	—	—	O	—	—	
N.D.	20	—	—	O	—	—	—	—	—	—	—	
Ohio	307	—	—	O	—	—	—	—	O	—	—	
R.I.	2,379	F	O	O	F	F	F	—	O	—	F	
S.C.	104	O	O	O	—	O	—	—	O	—	—	
Utah	1,400	F	F/O	F/O	F	F	—	—	—	—	—	
Va.	205,228	F	—	—	F	F	F	F	O	F	F	Fire Arms & Tool Marks/Number Restoration Latent Finger Prints Shoe Prints Tire Prints Questioned Finger Prints Handwriting Glass, Soil/Arson Accelerants
Wisc.	60	—	—	—	O	O	—	—	O	—	—	Lead-Milk, Pottery Arsenic-Wood

Table 4-50
XII. TOXICOLOGY
B. Biological Samples (F-Forensic, O-Other)

Lab & Region	Number of Samples	1. Blood							
		Ethyl Alcohol	Other Volatiles	Drugs and Narcotics	Lead	Other Metallic Poisons	Other Poisons	Insecticides	Other
Total	**832,734**								
Average	25,234								
New England	**240,572**								
Conn.	34,799	F	F	F	O	F/O	—	—	F/Carboxyhemoglobin
Mass.	171,473	—	—	—	O	—	—	—	O/Erythrocyte Protoporphyrin
Me.	12,428	F	F	F	O	F	F	O	
N.H.	—	—	—	—	—	—	—	—	
R.I.	18,556	F	F	F	O	F	F	—	
Vt.	3,316	F	—	F	—	—	O	—	
Middle Atlantic	**199,573**								
N.J.	199,573	—	—	—	O	—	—	—	O/Erythrocyte Protoporphyrin
N.Y.	—	—	—	—	—	—	—	—	
Pa.									
East North Central	**56,927**								
Ill.	19,036	F/O	F/O	F/O	O	F/O	F/O	F/O	
Ind.	—	—	—	—	—	—	—	—	
Mich.	1,777	F	—	—	—	—	—	—	Typing for Paternity Cases
Ohio	17,586	—	—	—	O	—	—	O	
Wisc.	18,528	F/O	O	F/O	O	O	O	—	O/Erythrocyte Protoporphyrin
West North Central	**24,724**								
Ia.	5,470	—	—	—	O	—	—	—	
Kans.	3,121	F	O	F/O	F	F	F	—	
Minn.	—	—	—	—	—	—	—	—	
Mo.	368	—	—	—	O	—	—	—	
Nebr.	15,730	F/O	—	F/O	O	—	—	—	
N.D.	35	—	—	—	O	—	—	—	
S.D.	—	—	—	—	—	—	—	—	
South Atlantic	**179,185**								
Del.	1,963	—	—	—	O	—	—	—	
D.C.	24,775	—	—	—	O	—	—	—	
Fla.	23,190	F/O	O	O	O	O	O	O	
Ga.	49,691	—	—	—	O	—	—	—	
Md.	—	—	—	—	—	—	—	—	
N.C.	1,377	—	—	—	O	O	—	—	
S.C.	6,044	O	O	O	O	O	O	O	
Va.	65,350	F	F	F	O	—	—	—	
W.Va.	—	—	—	—	—	—	—	—	
East South Central	**8,344**								
Ala.	6,000	—	—	—	O	—	—	—	
Ky.	2,344	F	F	F	F	F	F	—	
Miss.	—	—	—	—	—	—	—	—	
Tenn.	—	—	—	—	—	—	—	—	
West South Central	**43,970**								
Ark.	—	—	—	—	—	—	—	—	
La.	—	—	—	—	—	—	—	—	
Okla.	—	—	—	—	—	—	—	—	
Tex.	43,970	—	—	—	O	—	—	—	
Mountain	**68,771**								
Ariz.	—	—	—	—	—	—	—	—	
Colo.	43,691	F	—	F	—	—	—	—	F/CO
Ida.	7,622	F/O	F/O	F/O	F/O	—	—	—	
Mont.	2,689	F/O	—	F/O	O	O	—	—	O/Pesticide Screening
Nev.	—	—	—	—	—	—	—	—	
N.M.	9,812	F	—	O	O	O	—	—	
Utah	2,417	F	F	F	—	—	—	F/O	
Wyo.	2,540	F/O	—	—	—	—	—	—	
Pacific	**10,668**								
Alaska	95	F/O	—	F/O	—	—	—	—	O/Drug Level Monitoring
Cal.	10,573	F	—	—	O	—	—	—	FEP
Hawaii	—	—	—	—	—	—	—	—	
Ore.	—	—	—	—	—	—	—	—	
Wash.	—	—	—	—	—	—	—	—	
Territories									
Guam	—	—	—	—	—	—	—	—	
P.R.	—	—	—	—	—	—	—	—	
V.I.									

Table 4-51
XII. TOXICOLOGY
B. Biological Samples (F-Forensic O-Other)

Lab & Region	2. Urine							3. Body Tissues						
	Ethyl Alcohol	Other Volatiles	Drugs and Narcotics	Lead	Other Metal. Pois.	Other Poisons	Insecticides	Ethyl Alcohol	Other Volatiles	Drugs and Narcotics	Lead	Other Metallic Poisons	Other Poisons	Insecticides
New England														
Conn.	F	F	F	O	F/O	—	—	F	F	F	O	F/O	—	—
Mass.	—	—	—	F	—	—	—	—	—	—	—	—	—	—
Me.	F	F	F	O	F	F	F	F	F	F	O	F	F	O
N.H.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
R.I.	F	F	F	—	F	F	—	F	F	F	—	F	F	—
Vt.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Middle Atlantic														
N.J.	—	—	O	O	O	—	—	—	—	—	O	O	—	—
N.Y.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pa.														
East North Central														
Ill.	F/O	F/O	F/O	—	F/O	F/O	F/O	F	F	F	—	F	F	F
Ind.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mich.	F	—	—	—	—	—	—	—	—	—	—	—	—	—
Ohio	—	—	—	O	O	—	—	—	—	—	—	—	—	—
Wisc.	F/O	O	F/O	O	O	O	—	—	—	O	O	O	—	—
West North Central														
Ia.	—	—	O	O	—	—	—	—	—	—	—	—	—	—
Kans.	F/O	—	F	F/O	F/O	F/O	—	—	F	F	F/O	F/O	F/O	—
Minn.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mo.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Nebr.	F/O	—	F/O	—	—	—	—	—	—	—	—	—	—	—
N.D.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
S.D.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
South Atlantic														
Del.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
D.C.	F/O	—	F/O	—	O	—	—	—	—	—	—	—	—	—
Fla.	O	—	O	O	O	—	—	—	—	—	—	—	—	—
Ga.	—	—	O	—	—	—	—	—	—	—	—	—	—	—
Md.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
N.C	—	—	—	—	O	—	—	—	—	—	—	—	—	—
S.C.	O	—	O	O	O	—	O	—	—	—	O	O	—	—
Va.	F	F	F	O	—	—	—	—	—	F	O	O	—	—
W.Va.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
East South Central														
Ala.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ky.	F	F	F	F	F	F	—	F	F	F	F	F	F	—
Miss.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tenn.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
West South Central														
Ark.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
La.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Okla.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tex.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mountain														
Ariz.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Colo.	F	—	F	—	—	—	—	—	—	—	—	—	—	—
Ida.	F/O	F/O	F/O	—	—	—	—	F/O	F/O	F/O	—	—	—	—
Mont.	F/O	—	F/O	O	O	—	—	—	—	—	—	—	—	—
Nev.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
N.M.	—	—	F	—	—	—	—	—	—	—	—	O	O	—
Utah	F	F	F	—	—	—	F/O	F	F	F	—	—	—	F/O
Wyo.	F	—	F/O	—	—	—	—	—	—	—	—	—	—	—
Pacific														
Alaska	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cal.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hawaii	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ore.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wash.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Territories														
Guam	—	—	—	—	—	—	—	—	—	—	—	—	—	—
P.R.	—	—	—	—	—	—	—	—	—	—	—	—	—	—
V.I.														

Table 4-52
XII. TOXICOLOGY
B. Biological Samples (F-Forensic O-Other)

Lab & Region	4. Body Fluids							5. Breath	6. Other
	Ethyl Alcohol	Other Volatiles	Drugs and Narcotics	Lead	Other Metallic Poisons	Other Poisons	Insecticides		
New England									
Conn.	F	F	F	—	F	—	—		
Mass.	—	—	—	F	—	—	—		
Me.	F	F	F	O	F	F	O	F/Volatiles	
N.H.	—	—	—	—	—	—	—		
R.I.	F	F	F	—	F	F	—		
Vt.	—	—	—	—	—	—	—	F/Volatiles	
Middle Atlantic									
N.J.	—	—	—	—	—	—	—		
N.Y.	—	—	—	—	—	—	—		
Pa.									
East North Central									
Ill.	F/O	F/O	F/O	—	F/O	F/O	F/O		
Ind.	—	—	—	—	—	—	—		
Mich.	—	F	F	—	F	F	—		
Ohio	O	—	O	—	—	—	—		
Wisc.	O	—	O	—	—	O	—		
West North Central									
Ia.	—	—	—	—	—	—	—		
Kans.	F	F	F	F/O	F/O	F/O	—		Hair and Nails — As
Minn.	—	—	—	—	—	—	—		
Mo.	—	—	—	—	—	—	—		
Nebr.	—	—	—	—	—	—	—	F/Volatiles	
N.D.	—	—	—	—	—	—	—		
S.D.	—	—	—	—	—	—	—		
South Atlantic									
Del.	—	—	—	—	—	—	—		
D.C.	—	—	—	—	—	—	—		
Fla.	O	O	O	—	O	O	O		
Ga.	—	—	—	—	—	—	—		
Md.	—	—	—	—	—	—	—		
N.C.	—	—	—	—	—	—	—		
S.C.	O	O	O	—	O	O	O		
Va.	—	—	F	—	—	—	—		
W.Va.	—	—	—	—	—	—	—		
East South Central									
Ala.	—	—	—	—	—	—	—		
Ky.	F	F	F	F	F	F	—		
Miss.	—	—	—	—	—	—	—		
Tenn.	—	—	—	—	—	—	—		
West South Central									
Ark.	—	—	—	—	—	—	—		
La.	—	—	—	—	—	—	—		
Okla.	—	—	—	—	—	—	—		
Tex.	—	—	—	—	—	—	—		
Mountain									
Ariz.	—	—	—	—	—	—	—		
Colo.	—	—	—	—	—	—	—		
Ida.	F/O	F/O	F/O	—	—	—	—	F/Volatiles	
Mont.	F/O	—	F/O	—	—	—	—	F/Volatiles	
Nev.	—	—	—	—	—	—	—		
N.M.	—	—	—	—	—	—	—		
Utah	F	F	F	—	—	—	F/O		
Wyo.	—	—	—	—	—	—	—		
Pacific									
Alaska	—	—	—	—	—	—	—		
Cal.	—	—	—	—	—	—	—	F/Ethyl Alcohol	Water for Ethyl Alcohol
Hawaii	—	—	—	—	—	—	—		
Ore.	—	—	—	—	—	—	—		
Wash.	—	—	—	—	—	—	—		
Territories									
Guam	—	—	—	—	—	—	—		
P.R.	—	—	—	—	—	—	—		
V.I.									

Table 4-53
XIII. LABORATORY IMPROVEMENT PROGRAM
A. Clinical Laboratories

Lab & Region	No. of Prof. & Tech. Budgeted Positions	No. of Personnel (Prof. & Tech.) in FTE's *	No. in State	No. Lic. by State	No. Reg./ App./Cert. by State	Activities						
						PT	Field Visits	Labs Under Own Prog.	Labs Under Other Prog.	Trng.	Consult.	Other
Total	**3,509.7**	**304.6**	**14,113**	**5,076**	**9,081**							
Average	71.6	6.2	320.8	317.3	189.2							
New England	**383.3**	**25.6**	**834**	**195**	**712**							
Conn.	133.2	9.0	261	150	293	X	X	X	X	X	X	X
Mass.	110.2	13.0	400	–	301	X	X	X	X	X	X	X
Me.	31.0	2.0	56	1	56	X	X	–	X	X	X	–
N.H.	12.0	0.5	36	–	6	–	X	–	X	X	X	–
R.I.	68.0	1.0	44	44	44	X	X	X	X	X	X	
Vt.	28.9	0.1	37	–	12	X	X	X	–	X	X	–
Middle Atlantic	**233.0**	**35.0**	**976**	**972**	**448**							
N.J.	233.0	24.0	411	411	411	X	X	X	X	X	X	X
N.Y.	–	11.0	565	561	37	X	X	X	X	–	X	
Pa.												
East North Central	**607.1**	**39.0**	**3,474**	**750**	**1,853**							
Ill.	92.0	5.0	1,800	306	574	X	X	X	X	X	X	X
Ind.	59.0	2.0	–	–	222	X	X	X	X	X	X	
Mich.	252.9	10.0	444	444	375	X	X	X	X	–	–	–
Ohio	108.0	4.0	433	–	310	X	X	X	X	X	X	–
Wisc.	95.2	18.0	797	–	372	X	X	X	X	X	X	X
West North Central	**262.4**	**23.5**	**1,637**	**–**	**955**							
Ia.	67.0	2.5	227	–	98	X	X	–	X	X	–	–
Kans.	51.4	5.0	207	–	207	X	X	X	X	–	X	–
Minn.	47.0	7.2	625	–	333	X	X	X	X	X	X	X
Mo.	39.0	8.0	285	–	257	X	X	X	X	X	X	X
Nebr.	21.0	0.3	162	–	3	–	–	–	–	–	X	–
N.D.	23.0	0.5	52	–	12	X	X	X	–	X	X	–
S.D.	14.0	–	79	–	45	X	–	–	–	X	X	–
South Atlantic	**791.2**	**69.1**	**1,751**	**494**	**1,447**							
Del.	22.1	0.4	23	10	10	X	X	X	X	X	X	–
D.C.	50.0	3.0	50	–	50	–	X	X	X	X	X	–
Fla.	157.0	22.0	825	–	625	X	X	X	X	X	X	–
Ga.	71.0	21.0	297	297	–	X	X	X	X	X	X	–
Md.	189.0	5.5	187	187	187	–	X	X	X	X	X	–
N.C.	87.0	8.0	–	–	221	X	X	X	X	X	X	X
S.C.	83.2	4.0	147	–	–	X	–	–	–	X	X	–
Va.	100.9	1.2	–	–	178	X	X	X	X	X	X	–
W.Va.	31.0	4.0	222	–	176	X	X	X	X	X	X	X
East South Central	**294.0**	**5.6**	**1,505**	**–**	**621**							
Ala.	121.0	1.0	200	–	90	X	X	X	X	X	X	–
Ky.	57.0	2.4	1,100	–	202	X	–	–	–	X	X	–
Miss.	33.0	0.2	205	–	135	X	–	–	–	X	X	–
Tenn.	83.0	2.0		–	194	X	X	X	–	X	X	–
West South Central	**289.5**	**12.7**	**490**	**–**	**1,826**							
Ark.	53.0	3.0	160	–	120	X	X	X	–	X	X	–
La.	70.0	1.0	–	–	6	–	X	X	–	X	X	–
Okla.	34.5	1.7	330	–	190	X	X	X	X	X	X	–
Tex.	132.0	7.0	–	–	1,510	X	–	–	–	X	X	–
Mountain	**251.9**	**24.6**	**959**	**398**	**753**							
Ariz.	35.0	8.0	170	162	57	X	X	X	X	X	X	–
Colo.	46.0	2.5	115	–	115	X	X	X	X	X	X	–
Ida.	48.0	4.0	187	187	187	X	X	X	X	X	X	–
Mont.	18.9	1.0	126	–	126	X	X	X	–	X	X	–
Nev.	15.0	2.0	119	49	70	X	X	X	X	X	X	–
N.M.	36.0	1.0	90	–	90	X	X	X	X	X	X	–
Utah	43.0	4.9	112	–	68	X	X	X	X	X	X	–
Wyo.	10.0	1.2	40	–	40	X	X	X	X	–	X	–
Pacific	**336.3**	**60.5**	**2,592**	**1,882**	**123**							
Alaska	36.3	1.0	67	–	14	X	X	X	–	X	X	–
Cal.	227.5	50.0	2,055	1,825	40	X	X	X	X	X	X	–
Hawaii	37.5	1.5	70	57	69	–	X	–	X	X	X	–
Ore.	–	–	–	–	–	–	–	–	–	–	–	–
Wash.	35.0	8.0	400	–	350	X	X	X	X	X	X	X
Territories	**61.0**	**9.0**	**385**	**385**	**343**							
Guam	–	–	–	–	–	–	–	–	–	–	–	–
P.R.	61.0	9.0	385	385	343	X	X	X	X	X	X	–
V.I.												

*FTE = Full Time Equivalent (Person)

Table 4-54
XIII. LABORATORY IMPROVEMENT PROGRAM
B. Dairy/Food Laboratories

Lab & Region	No. of Prof. & Tech. Budgeted Positions	No. of Personnel (Prof. & Tech.) in FTE's	No. in State	No. Lic. by State	No. Reg./ App./Cert. by State	Activities						
						PT	Field Visits	Labs Under Own Prog.	Labs Under Other Prog.	Trng.	Consult.	Other
Total	**2,494.1**	**179.9**	**521**	**61**	**576**							
Average	69.3	5.0	18	8.7	18.6							
New England	**342.4**	**25.0**	**31**	**2**	**120**							
Conn.	133.2	9.0	26	–	26	X	X	X	–	X	X	–
Mass.	110.2	13.0	–	–	28	–	–	–	–	–	–	X
Me.	31.0	2.0	3	–	3	–	–	–	–	–	–	–
N.H.	–	–	–	–	–	–	–	–	–	–	–	–
R.I.	68.0	1.0	2	2	2	X	X	X	–	X	X	–
Vt.	–	–	–	–	–	–	–	–	–	–	–	–
Middle Atlantic	**–**	**11.0**	**–**	**14**	**14**							
N.J.	–	–	–	–	–	–	–	–	–	–	–	–
N.Y.	–	11.0	–	14	14	X	X	X	X	X	X	X
Pa.												
East North Central	**354.2**	**29.0**	**147**	**–**	**182**							
Ill.	92.0	5.0	–	–	42	X	X	X	X	X	X	X
Ind.	59.0	2.0	20	–	14	X	X	X	–	X	X	–
Mich.	–	–	–	–	–	–	–	–	–	–	–	–
Ohio	108.0	4.0	25	–	24	X	X	X	–	–	X	–
Wisc.	95.2	18.0	102	–	102	X	X	X	X	X	X	X
West North Central	**194.4**	**16.0**	**47**	**–**	**28**							
Ia.	67.0	2.5	31	–	–	–	–	–	–	–	–	–
Kans.	51.4	5.0	11	–	11	X	X	–	X	X	X	
Minn.	–	–	–	–	–	–	–	–	–	–	–	–
Mo.	39.0	8.0	–	–	12	X	X	X	X	X	X	–
Nebr.	–	–	–	–	–	–	–	–	–	–	–	–
N.D.	23.0	0.5	5	–	5	X	X	–	X	X	X	–
S.D.	14.0	–	–	–	–	–	–	–	–	–	–	–
South Atlantic	**698.1**	**47.7**	**92**	**26**	**93**							
Del.	–	–	–	–	–	–	–	–	–	–	–	–
D.C.	50.0	3.0	1	–	–	–	–	–	–	–	–	–
Fla.	157.0	22.0	40	–	8	X	X	X	–	X	X	–
Ga.	–	–	–	–	–	–	–	–	–	–	–	–
Md.	189.0	5.5	19	19	19	X	X	X	X	X	X	
N.C.	87.0	8.0	–	–	39	X	X	X	–	–	X	–
S.C.	83.2	4.0	12	–	8	X	X	X	–	X	X	–
Va.	100.9	1.2	13	–	12	X	X	X	X	X	–	–
W.Va.	31.0	4.0	7	7	7	X	X	X	–	X	X	–
East South Central	**294.0**	**5.6**	**112**	**9**	**78**							
Ala.	121.0	1.0	9	9	9	X	X	X	X	X	X	X
Ky.	57.0	2.4	48	–	31	X	X	X	–	X	X	–
Miss.	33.0	0.2	5	–	5	X	X	X	–	X	X	–
Tenn.	83.0	2.0	50	–	33	X	X	X	–	X	X	–
West South Central	**289.5**	**12.7**	**34**	**–**	**38**							
Ark.	53.0	3.0	2	–	2	X	X	X	–	X	X	–
La.	70.0	1.0	7	–	6	X	X	X	X	X	–	–
Okla.	34.5	1.7	–	–	6	X	X	X	–	X	X	–
Tex.	132.0	7.0	25	–	24	X	X	–	–	X	X	–
Mountain	**223.0**	**22.4**	**25**	**10**	**18**							
Ariz.	35.0	8.0	5	–	–	X	X	–	X	X	X	–
Colo.	46.0	2.5	8	–	8	X	X	X	–	X	X	–
Ida.	48.0	4.0	7	7	7	X	X	X	–	X	X	–
Mont.	–	–	–	–	–	–	–	–	–	–	–	–
Nev.	15.0	2.0	2	–	–	X	X	X	–	X	X	–
N.M.	36.0	1.0	3	3	3	X	X	X	–	X	X	–
Utah	43.0	4.9	–	–	–	–	–	–	–	–	–	–
Wyo.	–	–	–	–	–	–	–	–	–	–	–	–
Pacific	**37.5**	**1.5**	**4**	**–**	**2**							
Alaska	–	–	–	–	–	–	–	–	–	–	–	–
Cal.	–	–	–	–	–	–	–	–	–	–	–	–
Hawaii	37.5	1.5	4	–	2	–	X	X	–	X	X	–
Ore.	–	–	–	–	–	–	–	–	–	–	–	–
Wash.	–	–	–	–	–	–	–	–	–	–	–	–
Territories	**61.0**	**9.0**	**4**	**–**	**3**							
Guam	–	–	–	–	–	–	–	–	–	–	–	–
P.R.	61.0	9.0	4	–	3	–	X	X	–	X	X	–
V.I.												

Table 4-55
XIII. LABORATORY IMPROVEMENT PROGRAM
C. Water Laboratories

Lab & Region	No. of Prof. & Tech. Budgeted Positions	No. of Personnel (Prof. & Tech.) in FTE's	No. in State	No. Lic. by State	No. Reg./ App./Cert. by State	Activities						
						PT	Field Visits	Labs Under Own Prog.	Labs Under Other Prog.	Trng.	Consult.	Other
Total	**3,229.3**	**265.8**	**1,081**	**278**	**1,278**							
Average	75.1	6.2	31.8	34.7	32.0							
New England	**342.4**	**25.0**	**88**	**12**	**144**							
Conn.	133.2	9.0	69	–	69	X	X	X	–	X	X	–
Mass.	110.2	13.0	–	–	56	–	–	–	–	–	–	X
Me.	31.0	2.0	15	8	15	X	X	X	–	X	X	–
N.H.	–	–	–	–	–	–	–	–	–	–	–	–
R.I.	68.0	1.0	4	4	4	X	X	X	X	X	X	–
Vt.	–	–	–	–	–	–	–	–	–	–	–	–
Middle Atlantic	**233.0**	**35.0**	**119**	**191**	**191**							
N.J.	233.0	24.0	119	119	119	X	X	X	–	X	X	–
N.Y.	–	11.0	–	72	72	X	X	X	X	X	X	X
Pa.												
East North Central	**607.1**	**39.0**	**353**	**–**	**412**							
Ill.	92.0	5.0	–	–	74	–	X	X	–	X	X	X
Ind.	59.0	2.0	51	–	51	X	X	X	–	X	X	–
Mich.	252.9	10.0	16	–	10	–	X	X	–	X	X	–
Ohio	108.0	4.0	191	–	182	X	X	X	–	X	X	–
Wisc.	95.2	18.0	95	–	95	X	X	X	X	X	X	X
West North Central	**214.4**	**16.3**	**42**	**–**	**71**							
Ia.	67.0	2.5	24	–	24	–	X	X	–	X	X	–
Kans.	50.4	5.0	–	–	2	–	X	X	–	X	X	–
Minn.	–	–	–	–	–	–	–	–	–	–	–	–
Mo.	39.0	8.0	–	–	39	X	X	X	X	X	X	–
Nebr.	21.0	0.3	4	–	4	–	X	–	–	–	X	–
N.D.	23.0	0.5	12	–	–	–	X	X	–	X	X	–
S.D.	14.0	–	2	–	2	–	X	X	–	X	X	–
South Atlantic	**637.0**	**44.1**	**189**	**33**	**150**							
Del.	22.1	0.4	8	–	7	–	X	X	X	X	X	–
D.C.	50.0	3.0	1	–	–	–	–	–	–	–	–	–
Fla.	157.0	22.0	130	–	74	–	X	X	X	X	X	–
Ga.	–	–	–	–	–	–	–	–	–	–	–	–
Md.	189.0	5.5	36	26	26	X	X	X	X	X	X	–
N.C.	87.0	8.0	–	–	30	–	X	X	–	–	X	–
S.C.	–	–	–	–	–	–	–	–	–	–	–	–
Va.	100.9	1.2	7	–	6	–	X	X	X	X	X	–
W.Va.	31.0	4.0	7	7	7	–	X	X	–	X	X	–
East South Central	**294.0**	**5.6**	**134**	**9**	**71**							
Ala.	121.0	1.0	9	9	9	X	X	X	X	X	X	X
Ky.	57.0	2.4	30	–	24	–	X	X	–	X	X	–
Miss.	33.0	0.2	5	–	5	–	X	X	–	X	X	–
Tenn.	83.0	2.0	90	–	33	–	X	X	–	X	X	–
West South Central	**289.5**	**12.7**	**34**	**–**	**61**							
Ark.	53.0	3.0	1	–	16	–	X	X	–	X	X	–
La.	70.0	1.0	8	–	7	–	X	X	–	X	X	–
Okla.	34.5	1.7	–	–	14	–	X	X	–	X	X	–
Tex.	132.0	7.0	25	–	24	–	X	X	–	X	X	–
Mountain	**216.9**	**16.6**	**81**	**–**	**80**							
Ariz.	–	–	–	–	–	–	–	–	–	–	–	–
Colo.	46.0	2.5	11	–	11	–	X	X	–	X	X	–
Ida.	48.0	4.0	15	–	6	X	X	X	X	X	X	–
Mont.	18.9	1.0	21	–	31	X	X	–	X	X	X	–
Nev.	15.0	2.0	2	–	–	X	X	X	–	–	–	–
N.M.	36.0	1.0	22	–	3	–	X	X	–	X	X	–
Utah	43.0	4.9	–	–	19	X	X	X	X	X	X	–
Wyo.	10.0	1.2	10	–	10	–	X	X	–	X	X	–
Pacific	**334.0**	**62.5**	**38**	**33**	**97**							
Alaska	–	–	–	–	–	–	–	–	–	–	–	–
Cal.	227.5	50.0	–	–	65	X	X	X	X	X	X	–
Hawaii	37.5	1.5	5	–	5	–	X	X	X	X	X	–
Ore.	34.0	3.0	33	33	–	X	X	X	X	–	–	–
Wash.	35.0	8.0	–	–	27	–	X	X	–	X	X	–
Territories	**61.0**	**9.0**	**3**	**–**	**1**							
Guam	–	–	–	–	–	–	–	–	–	–	–	–
P.R.	61.0	9.0	3	–	1	X	X	X	–	X	X	–
V.I.												

Table 4-56
XIII. LABORATORY IMPROVEMENT PROGRAM
D. Other Laboratories

Lab & Region	Program Activity
Ala.	Certification of Municipal Water Laboratories
Alaska	Training/Consultation to all Laboratories in the Broad Area of Diagnostic Microbiology
Ariz.	Pre-Marital (Syphilis-Serology Certification, Proficiency Testing Consultation and Field Visits.) Blood Alcohol Analyst Permit Program (Proficiency Testing, Consultation and Field Visits).
Conn.	16 Dog Laboratories. Registration and Inspection
Ida.	Implied Consent-Permits Issued to 3,021 Alcohol Breath Test (Law Enforcement) Technicians and 68 Chemists and Technologists for Blood Alcohol Analysis; Inspection and Certification of 674 Breath Testing Machines in 317 Law Enforcement Agencies.
Kans.	Breath Alcohol Certification-Agencies; Operators: Field Visits and Training Schools.
Mont.	Highway Alcohol Program-16 Field Testing Sites and Operators at the Sites are Inspected or Tested and Approved.
N.C.	Quality Control on Media for Gonorrhea Screening Program. Distribution of Literature and Stock Culture for Quality Control in Microbiology.
Texas	Bacteriology, Mycology, Parasitology, Serology.
Va.	Commercial Blood Banks — On-Site Visits and Certification for State Health Dept.
Wash.	Syphilis Serology Program — Proficiency Testing, Field Visits, Training and Consultation. Microbiology Continuing Education — Study Specimens Mailed, Complete Write-Up of Organisms, Training and Consultation. Hemoglobin Quality Assurance — Check Test Specimens Mailed, Computer Printout of Mean, Standard Deviation and Youdin Square Plot, Consultation. Laboratory Architectural Review — Facility and Equipment Review — Consultation. Newsletter — Quarterly.
Wisc.	Certification of Milk and Water Laboratories for Compliance with Federal Codes.
Wyo.	Medical Facilities Certification Program — Inspect Laboratories for Medicare Certification.

Table 4-57
XIV. Biologics, Reagents, and Media Produced for Distribution

Lab	Number FTE's	Biologics		Reagents	Media	Materials Produced for Distribution
		Human	Lab			
Ala.	16.0	—	—	—	X	Thayer-Martin Media
Conn.....	8.5		X	X	X	VDRL Antigen VDRL Buffered Saline Control Sera for the Following Tests: VDRL, ART, RPR Card, FTA-ABS and Infectious Mononucleosis Streptococcus Culture Kits for Physicians' Offices Anti Group A Streptococcus Conjugate
Cal.....	3.0		X	X		Biologics — Rabies Infected Mouse Brain for FRA Test Quality Control Reagents — Fluorescein — Conjugated Antibody Preparation for: Rabies, Varicella — Zoster and Herpes Simplex Reagents Produced Bacterial Antigens and Immune Sera: Brucella Abortus Salmonella Paratyphi A Salmonella Paratyphi B Salmonella Typhi "O" Salmonella Typhi "H" Francisella Tularensis
Ga.	4.0	—	—	—	X	Modified Thayer-Martin
Ill.....	0.1	X	X	X		Silver Nitrate Solution for Infants' Eyes Standard Alcohol Solution for Breachalyzer Simulator
Ia.....	5.0				X	Media is produced by contract for the University of Iowa Hospital's Microbiology laboratory. Media production varies from primary plating & enrichment media to a large number of specific media for biochemical identification of almost anything capable of being cultured.
Ky.....	4.0	—	—	—	X	Lowenstein — Jensen Media Blood Agar Plates
Mass. ...	52.0	X	X			Albumin, Normal Globulin — Immune, Tetanus Immune, Rh Immune, Hepatitis B Immune Silver Nitrate 1% Diphtheria, Tetanus, Pertussis Diphtheria and Tetanus Toxoids Tetanus, Diphtheria Toxoids (Adult) Tetanus Toxoid Typhoid Vaccine Schick Test Outfit Diphtheria Antitoxin (Equine) Diphtheria Toxoid (Purified) Tetanus Toxoid (Purified) Horse Serum (Normal) Horse Blood (Defibrinated)
Mich.	62.4	X				Human Blood Derivatives — Antihemophilic Factor (Factor VIII) Immune Serum Globulin Normal Serum Albumin Dried Filbrinogen Viral — Smallpox Vaccine Bacterial — Typhoid Vaccine Tetanus Toxoid Adsorbed Diphtheria and Tetanus Toxoid Adsorbed Diphtheria, Tetanus Toxoid, Pertussis Vaccine Combined, Adsorbed Tetanus and Diphtheria Toxoids Adsorbed (Adult) Pertussis Vaccine Adsorbed Diphtheria, Tetanus, Poliomyelitis Vaccine Combined Adsorbed Diphtheria Toxoid Adsorbed Tuberculin, PPD
Minn.....	2.0	—	X	—	—	Thayer-Martin Plates

Table 4-57

XIV. Biologics, Reagents, and Media Produced for Distribution — Continued

Lab	Number FTE's	Biologics		Reagents	Media	Materials Produced for Distribution
		Human	Lab			
Mont.....	2.0			X	X	JEMBEC Plates with Modified Thayer-Martin Medium Stuart's Transport Medium MEM Viral Transport Medium
Nev.	3.0			X	X	GC Media
N.M.....	2.0	—	—	X	X	Reagents: Polyvinyl Alcohol 10% Formalin Buffered Glycerol Saline 0.6% NaCL Saline Sterile Collection Bottle W/Sodium Thiosulphate Sterile Collection Bottle W/Sodium Phosphate Media: Thayer-Martin (Modified) PAI Jones-Kendrick (Charcoal) Tryptose Phosphate Broth (Buffered W/Gelatin)
Ohio.....	3.5				X	Thayer-Martin Plates
S.C.	0.5			X	X	Materials Supplied to Environmental Control Labs: 47 separate media used for isolation and identification of bacteria from water. 20 separate reagents, stains and solutions.
S.D.	1.0				X	Loeffler's
Tenn.....	12.0	—	—	X	X	Buffered Glycerol — Saline Solution EDTA — Sodium Thiosulfate Solution Formalin, 5% Buffered H Broth Jones-Kendrick Medium Loeffler's Medium Modified Thayer-Martin Medium (for Transgrow System) (for 15mm x 60mm petri dishes) (for 15mm x 100mm petri dishes) PVA — Fixative Physiological Saline Trypticase Soy Agar
Texas	7.5	X	X	X	X	N. Gonorrhoeae Transport Medium Lowenstein — Jensen Medium FTA-ABS Sorbent VDRL Antigen and Saline Sheep Blood and Cells Bacterial Agglutinating Antigens D-T Pediatric, D-T-P, Diphtheria Toxoid Schick Test Toxin & Control Smallpox Vaccine Tetanus-Diphtheria Adult Tetanus Toxoid Typhoid Vaccine Silver Nitrate Solution
Vt.	1.0	—	—	—	X	Routine Bacteria Media
Wash.	>1			X	X	Tabco, Thayer-Martin, Amies Transport
W.Va.....	4.0			X	X	Transgrow Medium Water Sample Containers Containers for Mycobacteriology Specimens (a) Sputum, Urine, etc. (b) Gastric lavage. Enteric Specimen Containers ENDO Parasite Specimen Containers (a) Unpreserved (b) Formalin (c) PVA Fixative Viral Specimen Kits (Upper Respiratory, etc.)

Table 4-58
XV. RESEARCH AND DEVELOPMENT
A. Basic Research

Lab	Titles of Research Projects	Number of Positions	Funding Support			
			Federal Grant	Contract	State Funds	Other Funds
Cal.	Immunology of Viral Disease	11.6	196,929			
	Electron Microscopic Studies	1.8	43,115			
	Study of Naegleria Infections	2.0	48,163			
	Immunology of Multiple Sclerosis	1.5				35,000
	Cancer Virus Studies	4.0		97,100		
	Inactivation of Viruses for Vaccines	1.3	17,000			10,000
	Monitoring Techniques	2.0			95,000	
	Charac. Particulate Matter	3.0			98,000	
	Collection Atmos. Sulfate	5.6			184,000	
	Contact Electricity	0.7			27,000	
	Development of Reference Method for Plasma and RBC Cholinesterase Activity	2.0			X	
	Development of Reference Methods for Drug Screening in Urine	1.0			X	
	Infant Botulism Section	7.0			226,074	
Conn. . . .	Control of Sulfide Production by Enteric Bacteria	—			X	
Ida.	Community Pesticides Project	6.5	X		X	
Nev.	Drug Sensitivity in AFB	0.3			X	
Okla. . . .	Virus in Treated Sewage	0.2				
	Viral Titer in Transplant Patients	0.2			X	
	FTA — ABS Field Study	0.2			X	
Utah	Atherosclerosis Study	—			X	

Table 4-59
XV. RESEARCH AND DEVELOPMENT
B. Applied Research

Lab	Titles of Research Projects	Number of Positions	Funding Support			
			Federal Grant	Contract	State Funds	Other Funds
Alaska ..	Rabies Virus — Tissue Punch	*				
	Detection of IHNV in Hatchery Fish	*			5,000	
Cal.	Water Virology Methods	3.0			100,000	
	Virus Seed for Water Analysis	0.5		9,100		
	Geothermal Air Pollution	0.5		25,000		
	Co. Blood Lead Studies	1.0				36,000
	Conf. Methods AP Studies	0.2	17,200			
	Gonorrhea Control Project	3.0			87,680	
Fla.	SW Wastewater Treatment Plant Virus Monitoring Project	4.0		X		
	EPA — Monitoring for Pathogenic Naegleria	4.0	X			
	Rockefeller — Virus Fate in Wastewater Used for Cypress Wetlands Recharge	2.0				X
Ia.	The Mechanisms of Nitrate Reduction in *Mycobacteria sp.* and its Application to the Nitrate Reduction Test.	*			X	
	The Significance of Toxoplasma and Histoplasma Antibodies in Aqueous Humor.				X	
	The Quantitative Significance of Group B Streptococcus in Vaginal Cultures.				X	
Ohio	Encephalitis Surveillance	2.0	X		X	
Utah	EPA Laundry Unit Natural Radioactivity in Fossil Fuels	3.1	38,832		X	

*Projects Performed with Personnel Time and Funds Contributed, as Time Permits, from the Laboratory's Service Functions.

Table 4-60
XV. RESEARCH & DEVELOPMENT
C. Technical Development

Lab	Titles of Research Projects	Number of Positions	Funding Support			
			Federal Grant	Contract	State Funds	Other Funds
Conn. . . .	Increase the sensitivity of penicillin detection in the agar plate method	6.0			X	
	Detection of Delta-Amino – penicillanic acid				X	
	The improvement of basic GC media for primary isolation of *N. gonorrhoeae*				X	
	The use of A1 media in the determination of fecal contamination of shellfish				X	
	The production and use of group B FA conjugates				X	
	A disc Camp test for the identification of group B streptococci				X	
	The comparison of IgG specific and IgG non-specific conjugates with routine polyvalent conjugates for the FTA-ABS test				X	
	An investigation of sewage sludge for the presence of Salmonella organisms and Ascaris ova				X	
	Development of disc method for susceptibility testing of mycobacteria				X	
	Development of the potato dextrose urea agar for separation of Candida and Cryptococcus sp. in clinical cultures				X	
	Studies to more accurately interpret the tellurite reduction and urease tests used in the identification of mycobacteria				X	
	Development of paper chromatography to more definitely separate Nocardia-like organisms from streptomyces – like organisms by showing the differences in the composition of their cell wall				X	
	Studies to determine the incidence of Candida, Cryptococcus and Nocardia in raw sputa submitted for the isolation of tuberculosis				X	
	Development of Pyrazinamidase test to more accurately separate *Mycobacterium tuberculosis* from *Mycobacterium bovis*				X	
	Determined the usefulness of the lysozyme resistance test and incorporated the test to separate Nocardia from other actinomycetes				X	
	The evaluation and development of new media for *B. pertussis* isolation				X	
	The use of transformation technics in the definitive identification of *N. gonorrhoeae*				X	
Iowa* . . .	A comparison of cold enrichment and direct plating for the isolation of *Yersinia enterocolitica*				X	
	The development of a RIA procedure for the differentiation of acute, subacute, asymptomatic and chronic brucellosis				X	
	The application of the ELISA technique for the serodiagnosis of trichinosis, toxoplasmosis and amebiasis				X	
	Comparison of the plate agglutination, tube agglutination, the 2-ME agglutination and the card test for the determination of Brucella sp. antibodies.				X	
	Development of an Iowa Modification of the Piomelli extraction technique for EP analysis				X	
	Development of collection and sample preparation procedures to be used in micro blood lead analysis				X	
	Development of manual cadmium reduction method for nitrate analysis				X	
	Compare the sensitivity of extraction of abused drugs from human urine between solvent – solvent extraction and non-ionic resin XAD-2 column extraction, and studies the effect of pH on these extraction methods				X	
N.M.	Development of rapid viral diagnosis procedures.				X	
	Development of forensic toxicology & immunohematology procedures.				X	
	Automation of methods for nitrogen determination in potable waters.				X	
Ohio	Virus Isolation	0.5			X	
Okla. . . .	Tuberculosis Centrifugation	0.1			X	
	Rabies Fixation Time	0.1			X	
	Modified GC Media Evaluation	<0.1			X	

* Project performed with personnel time and funds contributed, as time permits, from the Laboratory's service function.

SECTION V
SPECIAL QUESTIONS

Table 5-1
Laboratory Organizational Structure

Lab.	Date of Current Organizational Chart		Did Organizational Structure Change During FY 1977	Description of Organizational Change
	State Health Department	State Laboratory		
Ala.	1-1-75	1-1-75	–	
Alaska	9-27-76	8-1-77	–	
Ariz.	11-1-76	3-1-77	–	
Ark.	7-1-77	7-1-77	–	
Cal.	2-18-77	10-4-77	–	
Colo.	9-1-76	9-1-76	–	
Conn.	5-10-76	9-20-76	–	
Del.	6-1-72	11-1-75	–	
D.C.				
Fla.	8-30-76	8-30-76	X	Epidemiology Research Center (19 employees), TB Research and Reference Laboratory (3 employees), and Occupational Health Lab. (2 employees) Transferred to Office of Laboratory Services as Part of Department of Health and Rehabilitative Services Reorganization.
Ga.	12-1-76	7-1-75	–	
Hawaii	12-1-76	8-12-75	–	
Ida.	10-21-77	10-21-77	–	
Ill.	4-1-77	10-7-77	–	
Ind.	1976	6-1-77	–	
Ia.		1976	–	
Kans.	3-14-77	9-15-77	–	
Ky.	8-1-77	10-1-74	–	
La.	10-1-76	10-1-76	–	
Me.	7-1-77	7-1-77	–	
Md.	7-1-76	1-1-77	–	
Mass.	1976	3-15-77	–	
Mich.	9-24-75	7-1-76	–	
Minn.	1-15-77	1-15-77	–	
Miss.	10-31-74	7-1-77	–	
Mo.	1-1-77	10-1-76	–	
Mont.	7-1-75	1-26-77	–	
Nebr.	9-1-76	6-1-77	X	Water Testing Placed in Separate Unit for Administrative Purposes.
Nev.	7-1-75	7-1-74	–	
N.H.	6-1-73	6-1-73	–	
N.J.	3-1-76	2-8-77	–	
N.M.	5-1-77	3-30-77	X	Minor Reallocations Within Administrative/Technical Support Organization. Establishment of One Radiochemist Position Within Chemistry Division.
N.Y.				
N.C.	12-1-76	11-1-77	–	
N.D.	7-1-75	7-19-77	–	
Ohio	5-15-75	1-15-77	X	Dropped Microscopy Section Divided Virology into Virus Isolation and Viral Serology
Okla.	3-1-77	3-1-77	X	Branch Laboratories Report to Assistant Chief, Lab. Services.
Ore.	1-1-77	6-1-77	X	Assistant Director Added to Staff
Pa.				
R.I.	6-1-76	9-25-75	–	
S.C.	6-1-77	11-1-76		Div. of Clinical Pathology Dissolved and Transferred to Diag. Microbiology and Environmental Lab. Cytology Section Abolished.
S.D.	7-1-77	7-1-77	–	
Tenn.	9-1-77	9-1-77	–	
Tex.	9-1-77	9-1-77	X	Reclassification of Professional Levels, Closing of Some Internal Units.
Utah	10-1-76	8-8-77	X	Chemistry Section Split into Two Sections — Environmental Chemistry and Toxicology/Pesticides. Health Service Coordinator Position Abolished & Replaced by Technical Services and Administration Section
Vt.	7-1-74	7-1-74	–	
Va.		1-1-77	–	
Wash.	8-1-76	3-1-77	X	Epidemiology & Laboratory Section Were Combined and Placed at the Office Level. Four Laboratory Units Were Elevated to Section Level and Subdivided into Two-Three Units per Section.
W.Va.	2-10-75	7-1-77	–	
Wisc.	3-15-76	3-15-76	–	
Wyo.	1974	1974	–	
Guam	7-1-76	7-1-76	–	
P.R.				
V.I.				

Table 5-2
STATUS OF PRESENT LABORATORY FACILITIES

Lab & Region	Year Laboratory Completed	Gross Space Square Feet	Net Space Square Feet	Space Change During FY 1977 – Square Feet
Average				
New England				
Conn.	1966	44,000	34,000	–
Mass.	1974	196,000	128,000	–
Me.	1969	12,000	6,100	–
N.H.	1973	29,411	25,000	–
R.I.	1928	19,752	16,660	–
Vt.	1953	7,400	6,320	–
Middle Atlantic				
N.J.	1969	34,800	29,580	–
N.Y.				
Pa.				
East North Central				
Ill.	1973	49,600	36,100	(–)1,450
Ind.	1951	26,448	19,940	–
Mich.	1968	202,940	142,060	–
Ohio	1971	80,898	48,960	–
Wisc.	1953	77,879	44,542	–
West North Central				
Ia.	1926	34,121	26,750	–
Kans.	1975	24,902	19,726	(+)200
Minn.	1969	21,400	18,200	–
Mo.	1939	20,000	15,632	(+)1,632
Nebr.	1973	7,140	4,400	–
N.D.	1968	6,000	5,243	–
S.D.	1972	8,624	4,965	–
South Atlantic				
Del.	1960	8,000	6,735	(+)1,522
D.C.	1942	30,000	24,000	–
Fla.	1954	–	–	(+)10,000
Ga.	1960	39,877	26,153	–
Md.	1974	151,692	103,590	–
N.C.	1973	60,000	36,000	–
S.C.	1965	30,000	20,000	–
Va.	1971	198,500	168,700	–
W.Va.	1954	20,654	14,341	–
East South Central				
Ala.	1954	25,147	11,415	–
Ky.	1960	30,000	22,000	(+)300
Miss.	1958	19,060	11,356	–
Tenn.	1954	20,317	16,374	–
West South Central				
Ark.	1968	19,500	10,870	–
La.	1958	39,824	19,695	–
Okla.	1973	25,544	17,249	–
Tex.	1958	71,622	60,000	(+)1,620
Mountain				
Ariz.	1976	21,255	25,006	–
Colo.	1960	13,500	11,475	(+)4,500
Ida.	1965	18,500	11,500	(+)728
Mont.	1957	14,704	12,498	–
Nev.	1977	9,300	7,500	(+)4,000
N.M.	1976	48,958	38,600	(+)29,000
Utah	1975	33,600	28,690	–
Wyo.	1974	14,400	8,325	–
Pacific				
Alaska	1972	15,055	11,304	–
Cal.	1954	175,000	108,000	–
Hawaii	1959	15,880	13,500	–
Ore.	1977	22,999	18,489	(+)12,429
Wash.	1906	14,783	12,566	–
Territories				
Guam	1973	4,936	4,311	–
P.R.	1952	18,000	15,306	–
V.I.				

Table 5-3A
STATUS OF PLANNING FOR NEW LABORATORY FACILITIES

Lab & Region	Definite Planning for Construction in Progress	Planned Laboratory Will:			If Expansion is Planned, Will Substantial Alterations be Made to Existing Lab
		Be a Separate Building	Replace Existing Laboratory	Be an Expansion to Existing Lab	
New England					
Conn.	X	–	–	X	–
Mass.	–	–	–	–	–
Me.	–	–	–	–	–
N.H.	–	–	–	–	–
R.I.	X	X	X	–	–
Vt.	–	–	–	–	–
Middle Atlantic					
N.J.	–	–	–	–	–
N.Y.					
Pa.					
East North Central					
Ill.	–	–	–	–	–
Ind.	–	–	–	–	–
Mich.	–	–	–	–	–
Ohio	–	–	–	–	–
Wisc.	–	–	–	–	–
West North Central					
Ia.	X(A)	–	X	–	–
Kans.	–	–	–	–	–
Minn.	–	–	–	–	–
Mo.	X	X	X	–	–
Nebr.	–	–	–	–	–
N.D.	–	–	–	–	–
S.D.	–	–	–	–	–
South Atlantic					
Del.	–	–	–	–	–
D.C.	–	–	–	–	–
Fla.	X(B)	X	X	X	X
Ga.	–	–	–	–	–
Md.	X	X	–	–	–
N.C.	–	–	–	–	–
S.C.	X	X	X	–	–
Va.	X	–	–	X	X
W.Va.	–	–	–	–	–
East South Central					
Ala.	X	X	X	–	–
Ky.	–	–	–	–	–
Miss.	–	–	–	–	–
Tenn.	X(C)	–	X	–	–
West South Central					
Ark.	X	–	–	X	–
La.	–	–	–	–	–
Okla.	–	–	–	–	–
Tex.	–	–	–	–	–
Mountain					
Ariz.	–	–	–	–	–
Colo.	–	–	–	–	–
Ida.	X	–	–	X	–
Mont.	–	–	–	–	–
Nev.	–	–	–	–	–
N.M.	–	–	–	–	–
Utah	–	–	–	–	–
Wyo.	–	–	–	–	–
Pacific					
Alaska	–	–	–	–	–
Cal.	X	–	–	X	–
Hawaii	–	–	–	–	–
Ore.	–	–	–	–	–
Wash.	–	–	–	–	–
Territories					
Guam	–	–	–	–	–
P.R.	–	–	–	–	–
V.I.					

A. Des Moines laboratory occupying part of new state office and lab. bldg.
B. Tallahassee Branch Laboratory.
C. Replacement of Branch laboratory in Jackson.

Table 5-3 B
Status of Planning for New Laboratory Facilities (continued)

Lab & Region	Planning Funds Have Been Appropriated	Architect Has Been Selected	Planning by Architect and Engineer in Progress	Planning by Architect and Engineer Essentially Complete	Construction Funds Have Been Approved
New England					
Conn.	X	X	X	X	X
Mass.	–	–	–	–	–
Me.	–	–	–	–	–
N.H.	–	–	–	–	–
R.I.	X	X	X	X	X
Vt.	–	–	–	–	–
Middle Atlantic					
N.J.	–	–	–	–	–
N.Y.					
Pa.					
East North Central					
Ill.	–	–	–	–	–
Ind.	–	–	–	–	–
Mich.	–	–	–	–	–
Ohio	–	–	–	–	–
Wisc.	–	–	–	–	–
West North Central					
Ia.	X	X	X	X	X
Kans.	–	–	–	–	–
Minn.	–	–	–	–	–
Mo.	X	X	X	X	X
Nebr.	–	–	–	–	–
N.D.	–	–	–	–	–
S.D.	–	–	–	–	–
South Atlantic					
Del.	–	–	–	–	–
D.C.	–	–	–	–	–
Fla.	X	X	X	–	X
Ga.	–	–	–	–	–
Md.	–	–	–	–	–
N.C.	–	–	–	–	–
S.C.	X	X	X	X	X
Va.	–	–	–	–	–
W.Va.	–	–	–	–	–
East South Central					
Ala.	X	X	X	X	X
Ky.	–	–	–	–	–
Miss.	–	–	–	–	–
Tenn.	X	X	X	X	X
West South Central					
Ark.	X	X	X	X	X
La.	–	–	–	–	–
Okla.	–	–	–	–	–
Tex.	–	–	–	–	–
Mountain					
Ariz.	–	–	–	–	–
Colo.	–	–	–	–	–
Ida.	–	X	–	X	–
Mont.	–	–	–	–	–
Nev.	–	–	–	–	–
N.M.	–	–	–	–	–
Utah	–	–	–	–	–
Wyo.	–	–	–	–	–
Pacific					
Alaska	–	–	–	–	–
Cal.	X	X	–	X	X
Hawaii	–	–	–	–	–
Ore.	–	–	–	–	–
Wash.	–	–	–	–	–
Territories					
Guam	–	–	–	–	–
P.R.	–	–	–	–	–
V.I.					

Table 5-3 C
Status of Planning for New Laboratory Facilities (continued)

Lab & Region	Project Has Been Advertised for Bids	Estimated Cost for Construction of Facility	Estimated Square Feet to be Constructed		Construction Did/ Should Begin on (or about) What Date	Construction Was/Will be Completed on (or about) What Date
			Gross	Net		
New England						
Conn.	–	5,000,000	44,000	38,000	April 1978	April 1980
Mass.	–	–	–	–	–	–
Me.	–	–	–	–	–	–
N.H.	–	–	–	–	–	–
R.I.	X	5,200,000	52,000	26,736	June 1976	Feb. 1978
Vt.	–	–	–	–	–	–
Middle Atlantic						
N.J.	–	–	–	–	–	–
N.Y.						
Pa.						
East North Central						
Ill.	–	–	–	–	–	–
Ind.	–	–	–	–	–	–
Mich.	–	–	–	–	–	–
Ohio	–	–	–	–	–	–
Wisc.	–	–	–	–	–	–
West North Central						
Ia.	X		12,000	7,500	July 1975	Nov. 1977
Kans.	–	–	–	–	–	–
Minn.	–	–	–	–	–	–
Mo.	X	4,000,000	36,000	26,000	March 1975	April 1977
Nebr.	–	–	–	–	–	–
N.D.	–	–	–	–	–	–
S.D.	–	–	–	–	–	–
South Atlantic						
Del.	–	–	–	–	–	–
D.C.	–	–	–	–	–	–
Fla.	–	350,000	6,000	4,500	1977	
Ga.	–	–	–	–	–	–
Md.	–	1,165,700	10,300	6,060	July 1981	Jan. 1983
N.C.	–	–	–	–	–	–
S.C.	X	5,200,000	66,000	45,000	Feb. 1976	June 1978
Va.	–		130,000			
W.Va.	–	–	–	–	–	–
East South Central						
Ala.	X	2,700,000	40,295	14,657	Sept. 1977	May 1979
Ky.	–	–	–	–	–	–
Miss.	–	–	–	–	–	–
Tenn.	X	1,120,000	12,000	9,000	Nov. 1977	July 1979
West South Central						
Ark.	–				Jan. 1978	Jan. 1980
La.	–	–	–		–	–
Okla.	–	–	–		–	–
Tex.	–	–	–		–	–
Mountain						
Ariz.	–	–	–	–	–	–
Colo.	–	–	–	–	–	–
Ida.	–	1,200,000				
Mont.	–	–	–	–	–	–
Nev.	–	–	–	–	–	–
N.M.	–	–	–	–	–	–
Utah	–	–	–	–	–	–
Wyo.	–	–	–	–	–	–
Pacific						
Alaska	–	–	–	–	–	–
Cal.	–	673,000	2,500	–	Jan. 1978	June 1978
Hawaii	–	–	–	–	–	–
Ore.	–	–	–	–	–	–
Wash.	–	–	–	–	–	–
Territories						
Guam	–	–	–	–	–	–
P.R.	–	–	–	–	–	–
V.I.						

Table 5-4
Energy Management

Lab & Region	Has Your Laboratory Established:		If Not, Do You Plan to Appoint an Energy Coordinator or Energy Committee During FY 1978
	Program to Study and Improve Plans to Conserve Energy	Energy Coordinator or Energy Management Committee	
New England			
Conn.	X	X	–
Mass.	X	–	X
Me.	X	X	–
N.H.	–	–	–
R.I.	–	–	–
Vt.	–	–	–
Middle Atlantic			
N.J.	X	X	–
N.Y.			
Pa.			
East North Central			
Ill.	X	X	–
Ind.	–	–	–
Mich.	X	X	–
Ohio	X	–	–
Wisc.	–	–	–
West North Central			
Ia.	–	–	–
Kans.	X	X	–
Minn.	X	X	–
Mo.	X	X	–
Nebr.	–	–	–
N.D.	–	–	–
S.D.	–	–	X
South Atlantic			
Del.	–	–	–
D.C.	X	X	–
Fla.	X	X	–
Ga.	–	–	–
Md.	–	–	–
N.C.	X	X	–
S.C.	X	–	–
Va.	–	–	–
W.Va.	X	–	X
East South Central			
Ala.	X	X	–
Ky.	–	–	–
Miss.	–	–	–
Tenn.	X	X	–
West South Central			
Ark.	–	–	–
La.	–	–	–
Okla.	–	–	–
Tex.	–	–	–
Mountain			
Ariz.	–	–	–
Colo.	–	–	–
Ida.	X	X	–
Mont.	–	–	–
Nev.	–	–	–
N.M.	–	X	–
Utah	–	–	–
Wyo.	–	–	–
Pacific			
Alaska	–	–	–
Cal.	X	–	–
Hawaii	X	X	–
Ore.	X	X	–
Wash.	X	X	–
Territories			
Guam	–	–	–
P.R.	–	–	–
V.I.			

Table 5-5
Relative Value Workload Measurement Structure

Lab & Region	Does Your Laboratory Use the Relative Value System of Workload Measurement	If Not Currently Using the Relative Value Do You Anticipate Using the System	Does Your Laboratory Maintain a Running Inventory of Laboratory Supplies
New England			
Conn.	X	–	X
Mass.	–	–	X
Me.	X	–	X
N.H.	–	X	X
R.I.	X	–	X
Vt.	X	–	X
Middle Atlantic			
N.J.	–	–	X
N.Y.			
Pa.			
East North Central			
Ill.	X	–	X
Ind.	–	X	X
Mich.	–	–	X
Ohio	X	–	X
Wisc.	X	–	X
West North Central			
Ia.	–	–	X
Kans.	–	X	X
Minn.	X	–	X
Mo.	–	X	X
Nebr.	–	X	–
N.D.	X	–	X
S.D.	X	–	X
South Atlantic			
Del.	X	–	X
D.C.	–	–	–
Fla.	X	–	X
Ga.	X	–	X
Md.	X	–	–
N.C.	X	–	X
S.C.	X	–	X
Va.	–	X	X
W.Va.	X	–	X
East South Central			
Ala.	–	X	X
Ky.	X	–	X
Miss.	X	–	X
Tenn.	X	–	X
West South Central			
Ark.	–	–	X
La.	–	X	–
Okla.	X	–	–
Tex.	X	–	X
Mountain			
Ariz.	X	–	X
Colo.	–	X	X
Ida.	X	–	X
Mont.	–	X	–
Nev.	–	X	X
N.M.	X	–	X
Utah	X	–	X
Wyo.	–	X	–
Pacific			
Alaska	X	–	X
Cal.	–	–	X
Hawaii	X	–	X
Ore.	–	X	X
Wash.	X	–	X
Territories			
Guam	X	–	X
P.R.	–	X	X
V.I.			

Table 5-6
Normal Work Week

Lab & Region	Number Hours Worked by Full Time Laboratory Employees During Normal Work Week			
	40.0	37.5	35.0	Other (Specify)
New England				
Conn.	–	–	X	
Mass.	–	X	–	
Me.	X	–	–	
N.H.	–	X	–	
R.I.	–	–	X	
Vt.	X	–	–	
Middle Atlantic				
N.J.	–	–	X	
N.Y.				
Pa.				
East North Central				
Ill.	–	X	–	
Ind.	–	X	–	
Mich.	X	–	–	
Ohio	–	X	–	
Wisc.	X	–	–	
West North Central				
Ia.	X	–	–	
Kans.	X	–	–	
Minn.	X	–	–	
Mo.	X	–	–	
Nebr.	X	–	–	
N.D.	X	–	–	
S.D.	X	–	–	
South Atlantic				
Del.	–	X	–	
D.C.	X	–	–	
Fla.	X	–	–	
Ga.	X	–	–	
Md.	–	–	X	
N.C.	X	–	–	
S.C.	–	X	–	
Va.	X	–	–	
W.Va.	–	–	–	38/hr. Week
East South Central				
Ala.	X	–	–	
Ky.	–	X	–	
Miss.	X	–	–	
Tenn.	–	X	–	
West South Central				
Ark.	X	–	–	
La.	X	–	–	
Okla.	X	–	–	
Tex.	X	–	–	
Mountain				
Ariz.	X	–	–	
Colo.	X	–	–	
Ida.	X	–	–	
Mont.	X	–	–	
Nev.	X	–	–	
N.M.	X	–	–	
Utah	X	–	–	
Wyo.	X	–	–	
Pacific				
Alaska	–	X	–	
Cal.	X	–	–	
Hawaii	X	–	–	
Ore.	X	–	–	
Wash.	X	–	–	
Territories				
Guam	X	–	–	
P.R.	–	X	–	
V.I.				