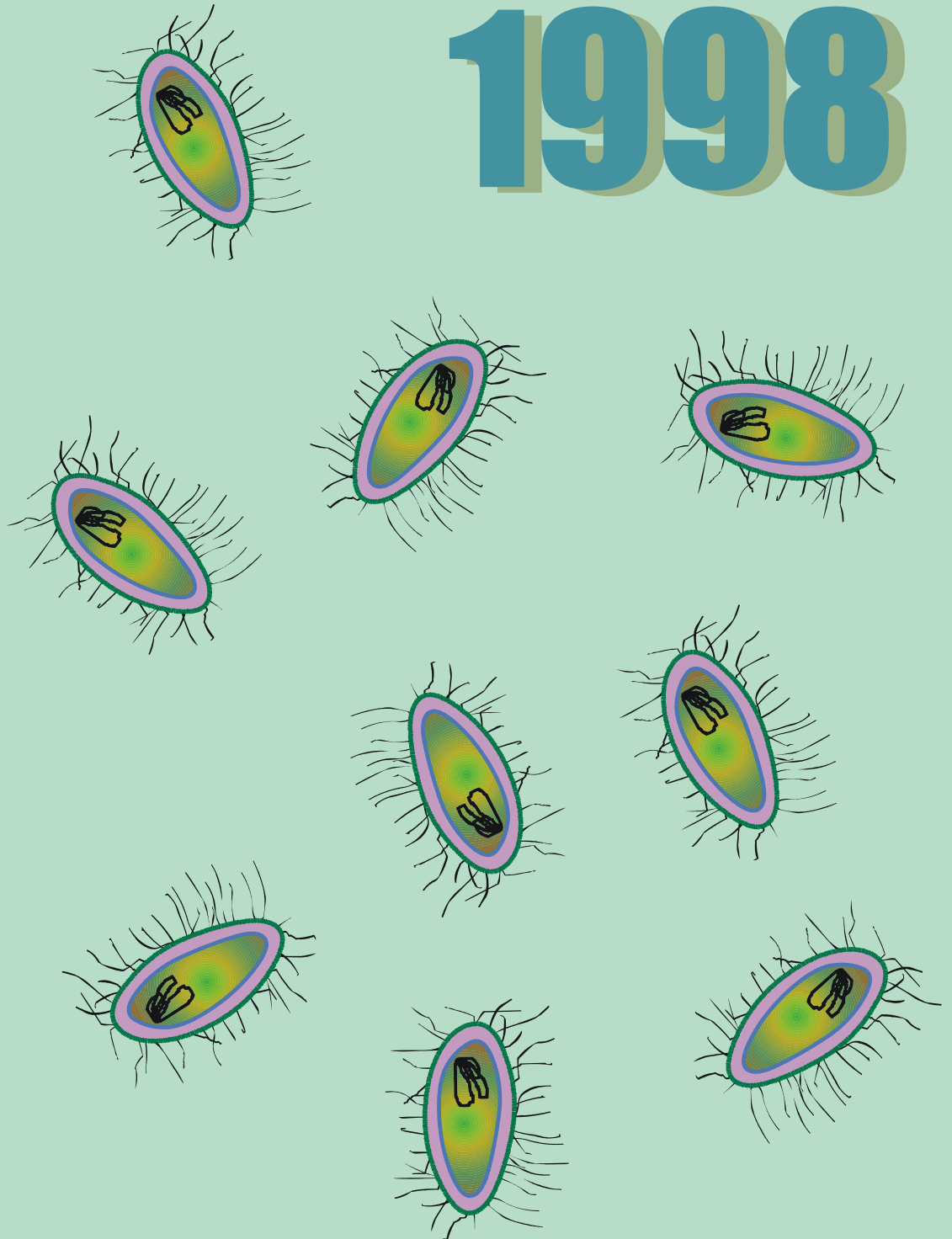


# Salmonella

*Annual Summary*

# 1998



Department of Health and Human Services  
Centers for Disease Control and Prevention  
National Center for Infectious Diseases  
Division of Bacterial and Mycotic Diseases  
Foodborne and Diarrheal Diseases Branch  
Atlanta, GA 30333



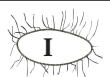
# Laboratory Confirmed *Salmonella* Surveillance Annual Summary, 1998

The Annual Summary contains surveillance data on reported laboratory-confirmed *Salmonella* isolates in the United States for 1998. The National *Salmonella* Surveillance System collects reports of isolates of *Salmonella* from human sources from every state in the United States. This information is reported through the Public Health Laboratory Information System (PHLIS), an electronic reporting system, by the State Public Health Laboratory Directors and State and Territorial Epidemiologists to the Foodborne and Diarrheal Diseases Branch and the Biostatistics and Information Management Branch of the Division of Bacterial and Mycotic Diseases in the National Center for Infectious Diseases.

The number of isolates reported by geographical area (e.g. state) represents the state where laboratory confirmation was performed; in some instances the reporting state is not the same as the state of residence of the person from whom the isolate was obtained. For *Salmonella* serotype *Typhi*, only the first isolation in a year for each person is counted. For the Annual Summary, duplicate records are deleted.

The PDF version of this document can be viewed online at [www.cdc.gov/ncidod/dbmd/phlisdata](http://www.cdc.gov/ncidod/dbmd/phlisdata). Further information concerning the data described in this report can be obtained by contacting the Foodborne and Diarrheal Diseases Branch (404) 639-2206. For further information concerning PHLIS please contact the Biostatistics and Information Management Branch (404) 639-1364.

The *Salmonella* Outbreak Detection Algorithm (SODA), developed by BIMB and FDDB, is a statistical algorithm designed to detect unusual clusters of isolates of *Salmonella* infection. SODA compares current *Salmonella* isolates reported through PHLIS by serotype to a 5-year historical baseline for that serotype and week to detect unusual increases from the baseline. Analyses can be conducted at state, regional, or national levels. Since 1996, SODA has been implemented at CDC and selected state health departments. If you would like more information on SODA, please call the PHLIS Helpdesk (404) 639-3365.



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TABLE 1  
 THE 20 MOST FREQUENTLY REPORTED SALMONELLA SEROTYPES  
 FROM HUMAN SOURCES REPORTED TO CDC IN 1998 AND FROM  
 NONHUMAN SOURCES REPORTED TO CDC AND USDA IN 1998

HUMAN 1998				NONHUMAN 1998			
RANK	SEROTYPE	NUMBER	PERCENT	RANK	SEROTYPE	NUMBER	PERCENT
1	TYPHIMURIUM *	8818	26.0	1	TYPHIMURIUM *	4837	22.9
2	ENTERITIDIS	6029	17.7	2	HEIDELBERG	2282	10.8
3	NEWPORT	2272	6.7	3	KENTUCKY	1265	6.0
4	HEIDELBERG	1900	5.6	4	DERBY	1061	5.0
5	JAVIANA	1167	3.4	5	SENFTENBERG	1008	4.8
6	AGONA	991	2.9	6	ENTERITIDIS	850	4.0
7	MONTEVIDEO	828	2.4	7	MONTEVIDEO	659	3.1
8	ORANIENBURG	693	2.0	8	ANATUM	649	3.1
9	MUENCHEN	639	1.9	9	HADAR	633	3.0
10	INFANTIS	600	1.8	10	AGONA	625	3.0
11	THOMPSON	571	1.7	11	INFANTIS	469	2.2
12	HADAR	544	1.6	12	SCHWARZENGRUND	416	2.0
13	BRAENDERUP	497	1.5	13	CHOLERAESUIS **	407	1.9
14	SAINTPAUL	479	1.4	14	MUENSTER	381	1.8
15	TYPHI	382	1.1	15	MBANDAKA	379	1.8
16	POONA	346	1.0	16	BREDENEY	349	1.7
17	MISSISSIPPI	314	0.9	17	NEWPORT	297	1.4
18	JAVA	248	0.7	18	SAINTPAUL	289	1.4
19	STANLEY	193	0.6	19	CERRO	278	1.3
20	PARATYPHI B	189	0.6	20	READING	259	1.2
	SUB TOTAL	27700	81.5			17393	82.4
	TOTAL	33971				21097	

\* TYPHIMURIUM INCLUDES VAR. COPENHAGEN

\*\* CHOLERAESUIS INCLUDES VAR. KUNZENDORF

TABLE 2  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY AGE AND SEX, 1998

AGEGROUP	SEX			TOTAL
	FEMALE	MALE	UNKNOWN	
< 1 YR	1482	1666	153	3301
1 TO 4 YRS	2410	2514	184	5108
5 TO 9 YRS	1229	1427	70	2726
10 TO 19 YRS	1320	1555	70	2945
20 TO 29 YRS	1692	1488	74	3254
30 TO 39 YRS	1617	1392	90	3099
40 TO 49 YRS	1370	1146	48	2564
50 TO 59 YRS	1084	740	46	1870
60 TO 69 YRS	864	603	37	1504
70 TO 79 YRS	774	515	41	1330
80+ YEARS	617	331	23	971
UNKNOWN AGE	2178	2043	1078	5299
TOTAL	16637	15420	1914	33971

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
AARHUS	.	.	1	4	13	6	.	6	16	9	55	
ABA	.	.	1	.	.	.	.	.	.	.	1	
ABAEETETUBA	1	2	5	3	1	2	10	17	8	7	66	
ABERDEEN	6	5	2	3	3	5	1	2	3	4	39	
ABONY	5	12	3	4	2	3	6	9	2	3	55	
ABORTUSBOVIS	1	.	.	.	.	1	.	.	.	.	2	
ABORTUSEQUI	.	.	.	.	.	.	.	.	1	.	1	
ACRES	.	.	.	.	.	.	.	1	.	.	1	
ADELAIDE	76	62	64	61	96	74	110	98	88	70	72	871
AEQUATORIA	.	.	.	.	.	.	.	.	.	1	.	1
AFLAO	.	.	.	.	.	.	.	.	1	.	.	1
AFRICANA	.	.	.	.	.	.	.	.	.	.	2	2
AGAMA	.	.	1	1	1	.	4	3	2	2	2	16
AGBENI	4	.	1	2	3	1	3	5	1	3	.	23
AGEGE	.	1	.	.	.	.	.	.	1	.	.	2
AGO	.	.	.	.	.	.	.	1	.	1	1	3
AGONA	1121	925	980	1006	750	651	753	683	606	740	991	9206
AGUEVE	.	1	.	.	1	.	2	2	4	3	6	19
AHMADI	.	.	.	1	.	.	.	.	.	.	.	1
AHUZA	.	.	.	.	.	.	.	.	1	.	.	1
AJI0B0	.	.	.	.	.	1	.	.	.	2	2	5

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
ALABAMA	7	2	1	.	3	.	1	1	2	2	2	21
ALACHUA	69	47	48	16	28	55	70	52	39	18	14	456
ALAGBON	.	1	.	.	.	.	.	.	.	.	.	1
ALAMO	.	.	.	.	.	2	.	1	.	.	1	4
ALBANY	47	56	42	23	24	30	29	49	26	21	23	370
ALBERT	.	.	1	.	.	.	2	1	1	.	.	5
ALBUQUERQUE	.	1	.	.	.	1	.	.	.	.	.	2
ALGER	1	.	.	.	.	.	.	.	.	.	.	1
ALLANDALE	.	.	.	.	.	.	.	.	.	.	1	1
ALTENDORF	.	.	.	1	.	.	.	.	.	.	.	1
ALTONA	.	.	.	1	.	.	1	.	1	1	.	4
AMAGER	.	1	1	1	3	2	.	6	1	8	3	26
AMERSFOORT	.	.	.	.	1	.	.	.	.	.	.	1
AMSTERDAM	7	15	4	2	3	3	4	11	2	9	5	65
ANATUM	266	228	285	232	158	194	146	174	271	208	138	2300
ANECHO	1	2	5	1	1	2	.	2	5	2	2	23
ANK	.	.	.	.	.	.	1	.	2	.	.	3
ANNEDAL	.	.	.	.	.	.	.	.	1	.	.	1
ANTONIO	.	.	1	1	.	.	.	.	.	.	.	2
ANTSALOVA	.	.	.	.	.	.	1	2	1	.	2	6
APAPA	.	.	.	.	.	.	.	.	.	2	.	2

(Continued)



TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
AQUA	.	.	1	1	1	1	.	3	2	1	.	9
ARAGUA	.	.	.	.	.	.	.	.	1	1	1	3
ARECHAVALETA	1	1	.	5	4	1	4	6	6	9	4	41
ARGENTINA	.	.	.	.	1	.	.	.	.	.	.	1
ARKANSAS	3	6	12	6	1	.	.	.	.	1	2	31
ASHANTI	.	.	.	1	.	.	.	.	.	.	.	1
ASSEN	.	1	2	.	.	.	.	.	.	.	.	3
ASSINIE	.	.	.	.	.	1	.	.	.	.	.	1
ATHINAI	.	.	.	.	.	.	.	.	.	.	1	1
AUGUSTENBORG	.	1	2	2	.	1	.	.	.	2	.	8
AVIGNON	.	.	1	.	.	.	1	.	.	.	.	2
AZTECA	1	1	1	.	.	1	.	.	.	.	.	4
BABELSBERG	.	.	1	.	.	.	.	.	.	.	.	1
BAGUIDA	.	.	.	.	.	1	.	.	.	.	.	1
BAHATI	.	.	.	.	.	.	.	.	1	.	.	1
BAHRENFELD	.	.	.	.	.	1	.	.	.	1	.	2
BAILDON	1	2	.	1	1	1	1	14	5	5	73	104
BALL	.	.	1	.	.	.	.	.	2	.	.	3
BANANA	.	.	.	1	1	1	.	.	1	1	1	6
BANCO	.	.	.	.	.	.	.	.	.	.	.	2
BARDO	32	24	33	11	4	8	8	1	28	10	9	168

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
BAREILLY	152	148	111	117	94	105	83	109	115	112	153	1299
BARRANQUILLA	.	.	.	.	.	.	.	.	1	.	.	1
BAZENHEID	1	.	.	.	.	.	.	.	.	.	.	1
BELEM	.	.	.	3	1	.	.	.	.	.	.	4
BELFAST	.	.	.	1	.	.	.	.	.	.	.	1
BENFICA	.	.	1	.	.	.	.	2	1	.	1	5
BENIN	.	.	.	.	.	.	1	.	1	.	.	2
BERE	6	.	.	3	1	1	2	1	1	8	1	24
BERGEDORF	2	.	.	.	.	.	.	.	.	.	.	2
BERKELEY	1	.	.	.	.	.	.	.	.	.	1	2
BERLIN	.	.	.	.	.	1	.	.	.	.	.	1
BERN	1	.	.	.	.	.	.	.	.	.	.	1
BERTA	497	653	487	419	333	401	399	367	118	87	123	3884
BIETRI	2	.	.	.	.	.	.	.	.	.	.	2
BINZA	3	.	2	5	1	1	2	1	.	.	1	16
BIRKENHEAD	2	.	.	.	.	.	2	.	2	7	4	17
BISPBJERG	.	.	.	.	.	.	.	.	1	1	.	2
BLEDGAM	.	1	2	5	2	6	6	.	2	4	3	31
BLIJDORP	.	.	.	.	.	.	.	.	1	.	.	1
BLOCKLEY	476	262	147	132	86	89	76	55	51	62	61	1497
BLUKWA	.	.	.	.	.	.	.	.	1	1	.	2

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL		
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998			
BOCHUM	.	.	.	.	.	.	.	.	.	.	.	.	.	5
BONAIRE	.	1	1	.	1	1	.	1	1	.	.	.	.	6
BONAMIES	.	.	2	.	.	.	.	.	.	.	.	.	.	2
BONARIENSIS	1	4	.	9	4	6	.	5	3	3	6	6	41	
BONGOR	.	.	.	.	.	.	.	1	1	.	.	.	.	2
BONN	2	2	2	.	.	.	7	4	1	.	.	1	19	
BORBECK	.	.	.	.	.	.	.	1	.	.	.	.	.	1
BORNUM	.	.	.	.	1	.	.	.	.	.	.	.	.	1
BOVISMORBIFICANS	46	73	40	36	26	35	40	25	41	47	64	473		
BRADFORD	4	2	1	2	54	44	35	12	1	3	1	159		
BRAENDERUP	636	745	758	411	477	381	426	588	531	559	497	6009		
BRANCASTER	.	.	.	.	.	.	.	.	.	.	.	1	1	
BRANDENBURG	186	195	176	161	188	257	259	284	181	167	132	2186		
BRAZIL	.	.	.	1	.	2	.	1	1	1	.	.	6	
BRAZOS	.	.	.	.	.	.	.	.	.	1	.	.	1	
BRAZZAVILLE	.	.	.	1	.	.	.	.	.	.	.	.	1	
BREDA	.	.	.	.	.	1	.	.	.	.	.	.	1	
BRENENEY	117	99	87	75	57	49	44	57	47	51	112	795		
BREFET	.	.	.	.	.	1	.	.	.	.	.	.	1	
BREZANY	.	.	.	.	.	.	1	.	.	.	.	.	1	
BRIKAMA	.	.	.	.	.	1	.	.	1	.	.	.	2	

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL		
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998			
BRISTOL	.	.	.	.	.	.	.	.	.	.	.	1	.	1
BRON	.	.	.	.	.	.	2	2	1	.	.	.	.	5
BRONX	.	.	.	.	.	.	1	.	.	.	2	2	.	5
BROOKLYN	.	.	.	.	.	.	.	.	.	.	.	.	1	1
BROUGHTON	1	.	.	.	.	.	.	2	.	.	.	.	.	3
BRUNEI	.	.	1	1	.	.	.	.	.	.	.	.	.	2
BUDAPEST	.	.	.	.	.	1	.	1	.	.	.	.	.	2
BUKAVU	.	.	.	.	.	.	.	.	.	.	.	1	.	1
BUKURU	1	.	.	.	.	.	.	.	.	.	.	.	.	1
BURGAS	.	.	.	1	.	.	.	.	.	.	.	.	.	1
BURUNDI	.	.	.	.	.	.	.	1	.	.	.	.	.	1
BUTANTAN	1	.	.	.	.	.	.	.	.	.	.	.	.	1
BUZU	.	.	.	.	.	.	1	3	.	.	5	4	.	13
CALABAR	.	.	.	.	.	.	.	.	.	.	.	.	1	1
CALIFORNIA	2	.	1	6	2	4	2	1	1	9	3	.	.	31
CAMBERWELL	.	.	.	.	.	.	.	.	.	.	.	.	1	1
CAMBRIDGE	1	1	.	.	.	.	.	1	.	.	.	.	.	3
CANADA	.	1	.	.	.	.	.	.	1	.	.	.	.	2
CANASTEL	.	.	1	.	.	.	.	.	.	.	.	.	.	1
CANNSTATT	.	.	.	.	.	.	.	.	.	.	1	1	.	2
CANOGA	1	.	1	2	28	1	.	.	.	.	.	.	.	33

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL			
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998				
CARACAS	.	.	.	.	.	.	.	.	.	.	.	.	3	.	3
CARMEL	.	.	.	.	.	.	.	.	1	.	.	.	.	.	2
CARNO	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
CARRAU	2	1	9	6	5	9	9	12	30	6	3	92			
CARSWELL	.	.	.	1	1	.	.	.	.	.	.	2			
CERRO	139	117	115	102	99	57	62	74	55	60	52	932			
CHAILEY	2	2	4	2	.	1	.	6	4	12	9	42			
CHAMELEON	1	1	1	2	3	9	9	12	11	7	8	64			
CHAMPAIGN	.	.	1	.	.	.	1	1	.	.	.	3			
CHANDANS	.	.	.	.	.	.	1	.	.	.	.	1			
CHARITY	.	.	1	1	.	1	.	.	.	.	.	3			
CHARLOTTENBURG	.	.	.	1	.	.	.	.	1	.	.	2			
CHESTER	42	22	369	27	30	23	21	34	26	36	24	654			
CHICAGO	.	.	.	.	.	1	1	.	.	.	1	3			
CHINCOL	.	.	1	1	1	2	.	.	.	.	1	6			
CHINGOLA	.	.	.	.	.	.	.	.	.	1	.	1			
CHITTAGONG	.	2	.	.	.	.	.	.	.	.	.	2			
CHOLERAESUIS	57	50	39	40	35	50	53	50	41	25	23	463			
CHOLERAESUIS VAR KUN	49	42	34	42	56	36	18	25	26	24	13	365			
CLACKAMAS	1	.	3	.	1	.	1	1	1	3	.	11			
CLAIBORNEI	.	.	.	1	.	.	.	.	.	.	1	2			

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL	
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998		
CLERKENWELL	.	.	1	.	.	.	.	.	.	.	.	.	1
COELN	4	2	3	5	1	4	2	2	7	4	5	39	
COLEYPARK	.	2	1	.	2	.	.	.	.	.	.	5	
COLINDALE	2	.	1	.	.	.	5	2	7	1	4	22	
COLORADO	.	.	.	1	1	1	1	1	1	1	2	9	
CONCORD	.	1	1	1	.	.	1	4	5	2	2	17	
CORVALLIS	.	1	1	1	1	2	.	1	1	1	1	10	
COTHAM	.	.	.	.	.	.	1	.	.	.	.	1	
CREMIEU	.	.	.	.	.	.	.	.	.	1	.	1	
CUBANA	26	20	21	29	32	32	61	44	34	36	72	407	
CULLINGWORTH	.	.	.	.	.	.	.	.	1	.	.	1	
CURACAO	2	1	.	1	.	1	1	.	.	.	.	6	
DAKOTA	1	.	.	.	.	.	.	.	.	.	.	1	
DAYTONA	1	2	2	3	1	5	3	3	4	6	3	33	
DECATUR	.	.	1	3	.	1	1	.	.	.	2	8	
DEGANIA	.	.	.	.	.	.	.	1	.	.	.	1	
DENVER	2	6	2	4	1	9	2	5	2	3	1	37	
DERBY	340	289	268	184	199	170	144	213	143	152	171	2273	
DESSAU	.	2	2	.	.	.	.	.	.	1	.	5	
DIBRA	1	.	.	.	.	.	.	.	.	.	.	1	
DIGUEL	.	.	.	.	.	.	.	.	4	2	1	7	

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL	
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998		
DJAKARTA	.	.	.	.	.	2	.	.	.	.	.	.	2
DJUGU	.	1	2	3	2	.	4	1	2	2	1	18	
DOBA	.	.	.	.	.	.	1	1	.	.	.	2	
DOEL	.	.	.	.	.	.	.	.	2	.	.	2	
DOULASSAME	.	.	.	1	.	.	.	.	.	1	1	3	
DRIFFIELD	1	.	.	.	.	.	.	.	.	.	.	1	
DROGANA	.	.	.	.	3	.	1	3	.	.	.	7	
DRYPOOL	15	8	5	7	.	4	4	8	5	7	4	67	
DUBLIN	92	121	103	106	100	90	65	81	85	61	78	982	
DUESSELDORF	8	13	14	10	6	19	12	13	6	6	15	122	
DUGBE	.	.	.	.	.	.	1	.	.	.	.	1	
DUIBSBURG	.	1	1	1	1	.	.	2	.	.	.	6	
DUMFRIES	.	.	1	.	.	.	.	.	.	.	.	1	
DURBAN	4	7	.	5	2	4	11	3	8	8	10	62	
DURHAM	.	2	.	5	3	1	5	6	4	2	.	28	
DUVAL	.	.	.	.	1	2	.	1	.	1	1	6	
EALING	.	.	.	4	2	2	8	24	26	8	6	80	
EASTBOURNE	15	11	2	11	5	8	13	10	13	3	8	99	
EDINBURG	5	14	1	4	.	1	3	4	.	.	1	33	
EDMONTON	.	.	1	.	.	.	.	.	.	.	.	1	
EILBECK	.	.	.	.	.	.	.	1	.	.	.	1	

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR												TOTAL	
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998			
EIMSBUETTEL	1	2	.	.	.	.	.	.	.	.	.	.	.	3
EKO	.	.	1	4	2	.	.	.	.	.	.	.	.	7
EKPOUI	.	.	.	1	.	1	.	.	.	.	.	.	.	2
EMEK	2	2	4	7	7	4	3	6	5	7	7	7	7	54
EMMASTAD	1	.	.	.	.	.	.	.	.	.	.	.	.	1
ENSCHEDÉ	.	.	.	.	1	.	.	.	.	.	.	.	.	1
ENTEBBE	.	.	.	.	1	.	2	.	8	4	.	.	.	15
ENTERITIDIS	7063	8466	8734	7755	6578	8071	9866	10201	9570	7924	6029	6029	6029	90257
ENUGU	.	.	.	.	.	.	.	1	1	1	.	.	.	3
EPPENDORF	.	.	1	.	.	1	1	.	.	.	.	.	.	3
ERLANGEN	.	.	.	1	.	.	.	.	.	.	.	.	.	1
ESCANABA	1	.	.	.	.	.	.	.	.	3	.	.	.	4
ESSEN	1	1	1	3	3	.	3	.	2	3	2	2	2	19
ETTERBEEK	.	.	.	.	.	.	.	.	.	1	.	.	.	1
FALKENSEE	1	.	1	1	.	.	1	2	.	1	.	.	.	7
FALLOWFIELD	.	.	.	.	.	.	.	.	.	3	.	.	.	3
FARMSÉN	.	.	.	1	1	.	3	2	2	6	4	4	4	19
FAYED	.	.	.	.	.	.	.	1	.	.	.	.	.	1
FERRUCH	.	1	.	.	.	.	.	.	.	.	.	.	.	1
FINKENWERDER	.	.	1	.	.	.	.	.	.	.	.	.	.	1
FISCHERKLETZ	.	.	1	.	.	.	.	.	.	.	.	.	1	2

(Continued)



TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
FLINT	7	.	5	29	20	30	32	39	34	43	55	294
FLORIDA	1	2	3	9	.	5	3	2	7	11	8	51
FLUNTERN	.	.	.	.	.	.	.	.	1	.	3	4
FORTLAMY	.	.	.	.	.	.	.	2	.	.	.	2
FREEFALLS	.	.	.	.	.	.	.	2	.	.	.	2
FREIBURG	.	.	.	.	.	1	.	.	.	.	.	1
FREMANTLE	.	.	.	.	.	.	.	1	.	.	.	1
FRESNO	.	.	.	.	.	.	1	1	.	.	.	2
FRIEDENAU	.	.	.	.	.	.	.	.	.	1	.	1
FRINTROP	.	.	.	.	.	.	.	.	1	.	.	1
FULICA	.	.	.	.	.	.	.	.	.	1	.	1
FYRIS	3	2	3	1	.	.	.	.	2	.	1	12
GABON	.	.	.	.	.	.	.	.	.	.	1	1
GALIEMA	1	1	.	3	.	.	.	.	.	.	.	5
GALIL	.	.	.	.	.	.	.	1	.	1	.	2
GALLINARUM	.	1	1	1	.	.	.	.	2	.	1	6
GAMABA	.	.	.	.	.	.	.	.	.	.	1	1
GAMBIA	.	.	.	.	.	.	.	1	.	2	.	3
GAMINARA	41	43	41	50	38	37	38	45	44	47	61	485
GARBA	.	.	.	1	.	.	.	.	1	.	.	2
GAROLI	.	.	.	1	.	1	.	.	.	.	.	2

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL		
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998			
GATESHEAD	.	.	.	.	.	3	.	.	.	.	.	.	.	3
GATOW	3	1	2	1	2	1	.	1	.	.	.	.	2	13
GATUNI	7	4	6	3	2	6	3	1	2	.	.	.	1	35
GEORGIA	.	.	2	.	.	.	1	2	.	.	.	.	2	7
GERA	.	.	.	1	1	.	.	.	.	.	.	.	.	2
GIVE	82	86	94	143	123	101	95	101	114	118	92	1149		
GLIDJI	.	.	.	.	.	.	.	.	1	.	.	1	.	1
GLOSTRUP	14	16	26	17	78	42	13	31	13	5	10	265		
GLOUCESTER	.	.	.	.	.	2	3	2	2	2	.	11		
GODESBERG	.	.	1	.	.	1	.	1	1	.	.	4		
GOETEBORG	.	.	.	.	.	.	.	.	.	1	.	1		
GOETTINGEN	1	.	1	2	2	1	.	.	.	1	1	9		
GOLDCOAST	.	.	1	.	.	.	.	1	.	1	1	4		
GOMBE	.	.	1	.	.	.	.	.	.	.	.	1		
GOODWOOD	.	.	1	.	.	.	.	.	.	.	.	1		
GROUP 51	.	.	.	.	1	.	.	.	1	1	2	5		
GROUP 52	.	.	.	.	.	.	.	.	2	.	.	2		
GROUP 53	.	.	.	.	.	.	2	1	5	3	2	13		
GROUP 54	.	.	.	.	.	.	.	1	.	.	.	1		
GROUP 56	.	.	.	.	.	.	.	.	3	1	.	4		
GROUP 57	.	.	.	.	.	.	.	.	.	.	1	1		

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL	
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998		
GROUP 58	.	.	.	.	.	3	.	3	.	.	3	2	11
GROUP 59	.	.	.	.	.	1	.	2	.	.	1	.	4
GROUP 60	.	.	.	.	.	.	.	3	2	6	3	2	16
GROUP 61	.	.	.	.	2	9	11	17	17	6	5	5	67
GROUP 64	.	.	.	.	.	1	.	.	.	.	.	.	1
GROUP 65	.	.	.	.	.	.	1	2	2	6	.	.	11
GROUP A	3	4	13	6	1	1	7	4	3	1	2	2	45
GROUP B	624	434	495	370	475	539	563	601	582	507	532	532	5722
GROUP C1	200	151	168	112	124	110	137	108	123	103	85	85	1421
GROUP C2	150	116	99	60	107	163	201	111	108	64	51	51	1230
GROUP D1	221	211	209	155	202	280	257	182	186	116	113	113	2132
GROUP D2	.	.	1	.	1	.	.	1	3	2	1	1	9
GROUP D3	.	.	.	.	.	.	.	.	.	.	.	2	2
GROUP E1	13	18	20	13	13	7	29	20	21	13	14	14	181
GROUP E2	.	1	.	1	.	.	.	.	2	4	2	2	10
GROUP E4	1	3	2	1	2	2	3	2	3	2	3	3	24
GROUP F	1	1	.	2	7	2	8	3	5	2	2	6	37
GROUP G	52	23	17	9	7	22	34	73	42	8	17	17	304
GROUP H	10	2	1	2	1	3	2	2	4	.	2	2	29
GROUP I	2	.	1	2	3	2	12	5	6	5	44	44	82
GROUP J	.	.	.	.	.	2	.	1	1	.	.	.	4

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR												TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998		
GROUP K	1	.	.	2	6	1	2	3	5	2	4	26	
GROUP L	.	.	.	.	1	.	3	2	.	1	1	8	
GROUP M	.	.	.	.	.	.	.	.	.	2	.	2	
GROUP N	.	.	.	.	1	1	.	.	1	.	1	4	
GROUP O	2	1	1	2	.	.	3	2	3	2	1	17	
GROUP P	1	.	.	1	.	11	4	4	1	4	1	27	
GROUP Q	.	.	.	.	.	.	.	1	.	1	1	3	
GROUP R	.	.	.	.	4	2	1	2	3	.	3	15	
GROUP S	.	.	.	.	.	3	5	5	5	5	1	24	
GROUP T	.	.	.	.	.	.	.	.	1	1	.	2	
GROUP U	.	.	.	.	.	2	2	3	4	1	.	12	
GROUP V	1	.	.	.	2	1	6	15	26	33	9	93	
GROUP W	.	.	.	.	2	13	24	15	21	10	3	88	
GROUP X	.	.	.	.	2	1	1	1	10	9	2	26	
GROUP Y	.	.	.	.	6	14	14	15	15	11	4	79	
GROUP Z	.	.	.	.	5	16	18	18	16	13	6	92	
GRUMPENSIS	1	1	2	1	.	3	1	3	.	.	1	13	
GUARAPIRANGA	.	.	.	.	.	.	.	.	.	.	.	1	
GUINEA	.	.	.	.	.	.	.	.	1	.	.	1	
HAARDT	77	75	49	22	10	13	10	16	6	5	2	285	
HADAR	2442	2007	1837	1970	1532	1298	1001	812	658	643	544	14744	

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
HADDON	.	.	.	.	.	.	.	1	.	.	.	1
HAELSINGBORG	.	.	.	.	1	1	.	.	.	.	.	2
HAGENBECK	.	.	.	.	2	.	.	1	1	1	.	5
HAIFA	4	3	8	4	2	4	2	2	3	4	3	39
HALMSTAD	.	.	1	.	1	.	3	.	1	.	.	6
HAMBURG	56	16	7	2	.	.	.	4	.	1	.	86
HANDEN	.	.	.	.	.	.	.	.	1	.	.	1
HARBURG	.	.	.	.	.	.	.	.	.	1	.	1
HARLEYSTREET	.	.	.	.	.	.	.	.	.	.	1	1
HARRISONBURG	.	.	1	.	.	.	.	.	.	.	.	1
HARTFORD	58	49	56	130	71	100	90	164	89	110	175	1092
HATFIELD	.	.	.	.	.	.	.	.	.	1	.	1
HATO	2	2	15	.	.	.	1	1	.	.	.	21
HAVANA	68	80	57	56	49	53	38	57	59	47	77	641
HAYINDOGO	.	.	.	.	.	.	.	.	.	.	1	1
HEERLEN	.	.	.	.	.	.	1	.	.	.	.	1
HEIDELBERG	5167	4722	3955	2972	2528	2457	1825	2095	1998	2104	1900	31723
HEILBRON	.	.	.	.	3	1	.	.	.	.	1	5
HERON	.	.	.	.	.	.	.	.	.	1	.	1
HERSTON	.	.	.	.	1	1	.	.	.	.	.	2
HIDALGO	.	2	.	.	.	1	1	.	.	1	.	5

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL	
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998		
HIDUDDIFY	.	.	4	.	.	.	1	.	.	.	.	3	8
HILLINGDON	.	.	.	.	.	.	.	.	1	.	.	.	1
HINDMARSH	.	.	3	1	1	1	.	2	1	1	3	13	
HISSAR	1	.	.	.	.	.	.	.	.	.	.	.	1
HOLCOMB	.	.	2	1	.	.	.	.	1	2	.	.	6
HOMOSASSA	.	.	.	.	.	.	.	.	1	.	2	3	
HORSHAM	1	.	1	1	1	.	.	.	2	.	.	6	
HOUTEN	3	4	3	2	5	3	7	3	21	1	6	58	
HULL	.	.	1	.	.	1	1	3	.	.	.	6	
HVITTINGFOSS	11	10	10	11	22	20	14	15	44	26	28	211	
HYDRA	.	.	1	.	.	.	.	.	.	.	.	1	
I 4,5,12:I:-	.	.	.	.	.	.	.	.	.	.	34	34	
IBADAN	14	7	19	21	20	13	24	46	33	42	39	278	
IDIKAN	.	.	.	5	6	6	2	.	11	4	1	35	
II 50:B:Z6	.	.	.	.	.	.	.	.	.	.	3	3	
IIIB 61:1,V:1,5,7	.	.	.	.	.	.	.	.	.	.	1	1	
ILALA	.	.	.	.	.	.	.	.	.	1	.	1	
ILLINOIS	.	1	.	1	.	.	.	.	1	.	.	3	
ILUGUN	.	.	.	.	.	.	.	.	3	.	.	3	
IMO	.	.	.	.	.	.	.	.	1	.	.	1	
INCHPARK	.	.	.	.	.	.	1	.	.	.	.	1	

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
INDIA	.	.	1	1	1	.	.	.	1	.	.	3
INDIANA	94	78	48	36	24	18	25	24	28	11	7	393
INFANTIS	1003	908	753	580	499	568	520	521	503	651	600	7106
INGANDA	1	.	.	.	1	.	.	.	.	.	.	2
INPRAW	.	.	.	.	1	.	.	.	.	.	.	1
INVERNESS	17	25	16	15	32	20	21	37	20	26	32	261
IPSWICH	.	.	.	1	.	.	.	1	1	.	.	3
IRCHEL	.	.	.	.	.	.	.	1	.	.	.	1
IRUMU	2	6	2	1	7	39	45	31	18	13	15	179
ISANGI	2	5	1	2	.	.	.	3	1	1	5	20
ISLINGTON	.	.	.	.	.	.	1	.	.	.	.	1
ISRAEL	.	.	.	.	1	.	.	.	.	.	.	1
ISTANBUL	29	26	21	5	13	12	7	10	9	8	7	147
ITAMI	2	2	.	2	.	.	1	.	1	2	8	18
ITURI	.	.	.	.	1	5	2	4	2	1	5	20
IV 44:Z4,Z23:-	.	.	.	.	.	.	.	.	.	4	6	10
IV 45:G,Z51:-	.	.	.	.	.	.	.	.	.	.	2	2
JACKSONVILLE	.	3	.	.	.	.	.	.	.	.	.	3
JAFFNA	.	.	.	.	.	1	2	.	.	.	.	3
JAJA	.	.	.	.	.	.	.	.	.	1	.	1
JAMAICA	.	.	.	2	2	1	2	6	.	2	1	16

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
JANGWANI	1	.	.	5	2	6	3	10	7	4	5	43
JAVA	205	193	120	148	156	176	172	268	289	184	248	2159
JAVIANA	424	578	703	786	648	641	540	758	749	675	1167	7669
JEDBURGH	.	.	.	.	1	.	.	.	.	1	.	2
JERICHO	.	.	1	.	.	.	.	.	.	.	.	1
JERUSALEM	1	.	1	.	1	.	.	.	.	.	.	3
JOAL	.	.	.	.	.	.	.	.	1	.	.	1
JODHPUR	.	.	.	.	.	.	.	.	.	.	1	1
JOHANNESBURG	92	61	78	108	53	63	48	74	44	44	32	697
JUBILEE	.	.	.	.	.	.	.	.	.	1	.	1
JUKESTOWN	.	.	.	.	1	.	.	.	.	.	.	1
KAAPSTAD	.	.	4	8	3	.	.	.	1	.	.	16
KADUNA	.	.	.	.	.	1	1	.	.	.	.	2
KALAMU	.	.	.	.	1	.	.	.	.	.	.	1
KAMBOLE	.	.	.	.	.	.	.	.	.	.	1	1
KAMPALA	.	.	1	.	.	.	.	.	.	.	.	1
KANIFING	.	1	.	5	.	3	.	.	.	1	.	10
KAOLACK	.	.	.	.	.	.	.	.	1	.	.	1
KEDUGOU	.	.	.	1	.	.	.	4	.	.	1	6
KENTUCKY	61	56	47	46	31	46	42	80	78	60	58	605
KIAMBU	.	13	21	11	4	7	6	14	17	14	13	120

(Continued)



TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
KIBI	.	.	.	.	.	1	.	.	.	.	.	1
KIBUSI	.	.	1	.	.	.	.	.	3	.	.	4
KILWA	.	.	.	.	.	.	11	4	2	.	1	18
KIMBERLEY	.	.	1	.	.	.	.	.	.	.	.	1
KIMUENZA	.	.	.	3	.	.	2	.	.	.	.	5
KINGABWA	.	.	.	.	1	1	1	1	.	2	.	6
KINGSTON	3	2	.	4	1	1	1	.	.	3	1	16
KINONDONI	.	.	.	.	1	.	.	.	1	1	1	4
KINSHASA	2	1	.	.	.	.	2	4	7	6	1	23
KINTAMBO	.	2	3	1	2	17	19	21	19	14	20	118
KIRKEE	.	.	.	.	.	.	.	.	.	1	.	1
KISANGANI	.	1	.	.	1	.	.	2	.	.	.	4
KISARAWA	.	.	.	.	.	1	.	.	.	2	2	5
KISII	.	.	.	1	.	.	.	.	.	.	.	1
KITENGE	.	.	.	.	.	.	.	1	.	.	.	1
KODJOVI	.	.	.	2	.	.	1	.	.	.	.	3
KOESSEN	.	.	.	.	.	.	.	.	1	.	.	1
KOKETIME	1	.	.	.	.	.	.	.	1	.	.	2
KOKOLI	.	.	.	.	.	.	.	.	.	.	1	1
KOKOMILEMLE	.	5	2	2	1	2	2	2	2	3	1	22
KONSTANZ	.	.	1	.	.	.	.	.	.	.	.	1

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL	
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998		
KORTRIJK	.	.	1	.	.	.	.	.	.	.	.	.	1
KOTTBUS	23	7	18	21	42	27	22	49	9	11	2	231	
KPEME	.	.	.	.	.	1	.	.	.	.	.	1	
KRALENDYK	.	.	1	4	5	5	3	10	15	4	14	61	
KREFELD	5	2	1	1	1	9	3	3	2	1	.	28	
KUA	.	.	.	.	1	1	1	2	1	1	1	8	
KUILSRIVIER	.	.	2	.	.	.	.	.	.	.	.	2	
KUMASI	.	.	.	.	.	.	1	.	.	.	.	1	
KUNDUCHI	.	.	.	.	.	.	.	.	.	.	1	1	
KURU	.	.	.	.	.	.	1	.	.	.	.	1	
LABADI	.	.	.	.	1	.	1	2	.	.	1	5	
LAGOS	1	3	.	.	3	1	1	2	1	1	.	13	
LAMBERHURST	.	.	.	.	.	.	.	.	.	.	1	1	
LAMIN	.	.	.	.	.	.	.	.	.	.	1	1	
LANDAU	.	.	.	.	.	.	.	.	.	1	.	1	
LANDWASSER	.	.	.	.	.	1	.	.	.	.	1	2	
LANGENSALZA	.	.	.	.	.	.	.	.	1	.	1	2	
LANKA	7	8	6	.	1	1	3	.	.	.	1	27	
LANGING	1	.	1	.	.	1	.	.	.	.	.	3	
LAROCHELLE	3	5	2	5	2	3	4	4	4	1	6	39	
LAWINDALE	1	.	.	.	.	1	.	.	1	.	.	3	

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR												TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998		
LAWRA	.	.	1	.	.	.	.	.	.	.	.	.	1
LEOBEN	.	.	1	.	.	.	.	.	.	.	.	.	1
LEOPOLDVILLE	.	.	1	.	.	.	.	.	.	.	.	.	1
LEXINGTON	4	2	5	1	3	5	3	1	2	1	.	.	27
LICHTENBERG	.	.	.	.	1	.	.	.	.	.	.	.	1
LILLE	1	1	4	2	4	3	1	.	.	3	.	.	19
LIMBE	.	.	.	.	.	1	.	1	.	.	.	1	3
LIMETE	.	.	.	1	1	.	.	.	1	.	6	1	10
LINDENBURG	17	12	12	12	8	11	6	9	5	3	10	10	105
LINDI	.	.	.	.	.	.	.	.	1	.	.	.	1
LITCHFIELD	172	117	80	94	92	116	93	115	158	105	119	119	1261
LIVERPOOL	1	2	3	6	6	1	.	2	3	3	.	.	27
LIVINGSTONE	34	52	35	22	27	12	16	13	18	6	5	5	240
LOANDA	.	.	.	7	3	3	.	.	.	1	.	.	14
LOCKLEAZE	.	.	.	.	1	.	3	2	.	.	1	.	7
LOHBRUEGGE	.	1	.	.	.	.	.	2	4	.	.	.	7
LOMALINDA	8	8	5	6	10	14	15	15	24	12	16	16	133
LOME	.	.	.	.	.	1	2	.	2	2	.	.	7
LOMITA	2	5	5	3	1	5	1	2	5	3	3	3	35
LOMNAVA	.	.	.	2	.	.	.	.	.	.	.	.	2
LONDON	60	52	40	19	21	14	15	36	23	33	28	28	341

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL	
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998		
LOSANGELES	.	.	.	.	.	.	.	.	1	.	.	.	1
LOVELACE	.	.	.	.	.	.	1	.	.	.	.	.	1
LUCIANA	.	.	4	2	1	.	4	.	1	3	3	3	18
LUKE	.	.	.	.	.	.	2	.	.	.	.	.	2
MAARSEN	.	.	.	.	.	1	.	.	.	.	.	.	1
MADELIA	5	5	12	8	10	3	5	8	21	7	12	12	96
MAGWA	.	.	.	.	.	.	.	.	.	1	1	1	2
MAIDUGURI	.	.	.	.	.	.	.	.	.	1	.	.	1
MAKUMIRA	.	.	.	.	.	.	1	.	.	.	.	.	1
MALSTATT	.	1	.	.	.	.	.	.	2	.	.	.	3
MAMPEZA	.	.	.	.	.	.	.	.	1	.	.	.	1
MANCHESTER	.	2	1	.	.	.	.	.	.	.	.	.	3
MANGO	.	.	.	1	.	.	.	.	.	.	.	.	1
MANHATTAN	106	69	50	36	49	130	92	72	101	99	73	73	877
MANILA	.	1	1	.	.	.	1	.	.	.	.	.	3
MAPO	.	.	.	.	1	1	.	1	.	.	.	.	3
MARACAIBO	1	2	.	.	.	.	.	.	.	.	.	.	3
MARICOPA	.	.	.	.	1	.	.	.	.	.	.	.	1
MARINA	3	2	5	10	17	30	53	75	81	36	47	47	359
MARYLAND	.	.	.	.	.	.	.	.	.	.	.	1	2
MATADI	.	.	1	2	.	6	20	10	27	9	4	4	79

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL			
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998				
MATOPENI	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
MBANDAKA	262	190	135	206	130	167	118	154	223	189	147	1921			
MELEAGRIDIS	10	6	18	25	8	15	12	30	207	43	39	413			
MEMPHIS	.	.	.	1	.	2	.	.	1	1	.	5			
MENDEN	.	.	1	.	.	.	.	.	.	.	.	1			
MENDOZA	1	.	.	1	1	.	1	.	.	1	3	8			
MENHADEN	8	2	4	1	5	.	2	5	14	1	.	42			
MENSTON	.	.	.	2	2	.	.	.	.	1	.	5			
MGULANI	.	.	.	.	.	.	.	.	2	.	.	2			
MIAMI	21	41	28	115	70	98	126	74	52	76	99	800			
MICHIGAN	.	1	1	1	.	.	3	8	1	.	2	17			
MIDWAY	.	.	.	1	1	.	.	.	.	.	.	2			
MIKAWASIMA	2	5	8	2	7	2	1	7	.	2	.	36			
MINNEAPOLIS	5	18	6	7	4	1	.	.	1	.	.	42			
MINNESOTA	13	12	22	21	19	28	13	36	28	26	17	235			
MISSION	2	.	.	.	.	.	1	.	.	.	.	3			
MISSISSIPPI	114	136	175	170	137	156	152	199	180	205	314	1938			
MOERO	.	.	.	.	.	.	.	2	.	.	.	2			
MOLADE	5	.	1	1	1	1	1	.	.	1	1	12			
MONO	.	.	.	.	.	.	1	1	.	.	2	4			
MONS	.	.	2	1	.	.	.	.	2	.	.	5			

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
MONSCHAUI	3	5	6	2	9	8	9	11	10	3	75	
MONTEVIDEO	788	794	928	868	559	789	631	685	1227	718	828	8815
MOREHEAD	.	.	.	.	1	1	1	2	.	.	.	5
MOROTAI	.	.	1	.	.	.	.	.	.	.	.	1
MOSCOW	.	.	2	1	15	.	.	.	1	.	4	23
MOUNTPLEASANT	.	.	.	.	.	.	1	.	.	1	1	3
MOWANJUM	.	.	.	.	.	.	1	.	2	.	.	3
MPOUTO	.	.	.	.	.	.	1	.	.	1	.	2
MUENCHEN	511	451	464	506	449	657	559	754	595	543	639	6128
MUENSTER	65	51	86	68	47	69	100	87	96	73	68	810
MUNDSBURG	.	.	.	1	.	.	.	.	.	.	.	1
NACHSHONIM	.	.	.	.	.	.	.	.	1	.	.	1
NAGOYA	.	.	.	.	.	.	1	.	.	1	.	2
NAMIBIA	.	.	1	.	.	.	.	.	1	.	.	2
NAPOLI	.	.	.	1	.	.	.	.	1	.	.	2
NARASHINO	.	.	.	.	.	1	.	1	1	1	.	4
NCHANGA	1	.	.	.	.	.	.	.	.	.	1	2
NDOLO	.	.	.	.	.	1	.	.	.	.	.	1
NEGEV	.	.	.	.	.	.	1	1	.	.	.	2
NESSZIONA	.	.	.	.	.	.	.	.	.	4	.	4
NEUDORF	.	.	.	.	.	1	.	.	.	.	.	1

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
NEWBRUNSWICK	11	17	22	8	8	5	3	20	22	26	36	178
NEWHAW	2	2	.	.	.	.	.	4	1	1	1	11
NEWINGTON	12	21	14	26	25	15	13	17	16	20	25	204
NEWLANDS	.	.	.	.	.	.	.	.	1	.	.	1
NEWMEXICO	.	2	1	.	1	3	2	.	.	1	.	10
NEWPORT	2901	2111	1802	1818	1481	1487	1673	2566	1985	1584	2272	21680
NEWROCHELLE	.	.	.	.	.	.	.	2	1	1	1	5
NEWYORK	.	.	.	.	.	.	.	.	3	4	.	7
NGILI	.	.	.	.	.	.	1	.	.	.	.	1
NIAKHAR	.	.	.	.	1	.	.	.	.	.	.	1
NIENSTEDTEN	1	1	.	3	.	1	2	.	.	.	.	8
NIGERIA	1	.	.	.	.	.	.	.	1	.	.	2
NIMA	.	.	1	.	.	.	1	1	4	1	5	13
NITRA	.	1	.	.	.	.	.	.	3	.	.	4
NOLA	.	.	.	.	.	.	.	.	1	1	.	2
NOORDHOEK	.	.	.	.	.	.	.	1	.	.	.	1
NORWICH	49	49	58	32	41	59	98	51	52	56	67	612
NOTTINGHAM	.	.	.	2	1	1	3	3	3	5	2	20
OAKLAND	1	2	3	2	2	3	4	1	4	.	.	22
OCHIIGU	.	.	.	.	.	1	.	.	.	.	.	1
OCHSENZOLL	.	.	.	.	.	.	1	.	.	2	.	3

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL	
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998		
OERLIKON	.	.	.	.	.	.	1	.	.	.	.	.	1
OFFA	.	.	.	.	2	1	.	.	.	.	.	.	3
OHIO	281	153	166	132	161	132	101	105	67	100	79	1477	
OKATIE	.	.	.	.	.	1	.	1	1	.	.	3	
OLDENBURG	1	.	.	.	.	1	.	.	.	.	1	3	
ONARIMON	1	.	.	.	.	.	.	.	.	.	.	1	
ONDERSTEPOORT	2	1	.	.	.	.	.	1	2	.	.	6	
ONIREKE	.	.	1	.	.	.	1	1	.	.	.	3	
ONTARIO	.	.	.	.	.	2	.	.	.	.	.	2	
ORANIENBURG	632	572	501	655	597	522	602	595	690	623	693	6682	
ORDONEZ	1	.	.	.	.	.	.	.	.	.	.	1	
ORIENTALIS	.	.	.	.	.	.	.	2	6	.	1	9	
ORION	2	5	1	.	4	3	1	1	6	3	1	27	
ORITAMERIN	1	.	1	3	1	.	.	.	.	.	.	6	
OSLO	24	8	16	11	14	19	14	13	31	25	31	206	
OTHMARSCHEN	1	4	.	6	.	.	4	2	6	6	7	36	
OUAKAM	.	1	.	.	2	7	2	4	.	.	.	16	
ODWIJK	.	.	.	.	.	.	.	.	.	.	1	1	
OVERSCHIE	.	.	.	.	.	1	.	3	4	3	3	14	
OYONNAX	.	.	.	1	.	.	.	.	.	.	.	1	
PAKISTAN	4	5	1	2	.	1	.	.	2	4	.	19	

(Continued)



TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
PANAMA	264	266	304	236	185	173	163	173	148	144	119	2175
PAPUANA	.	.	.	.	1	.	.	1	.	1	.	3
PARATYPHI A	86	69	69	76	80	53	79	86	86	72	85	841
PARATYPHI B	126	114	89	101	110	208	228	241	298	159	189	1863
PARATYPHI C	2	5	2	1	2	1	2	2	1	1	.	19
PARERA	1	.	.	.	2	2	4	7	7	2	4	29
PARIS	.	.	1	.	.	.	.	.	.	.	.	1
PATIENCE	.	.	.	.	.	.	.	.	1	.	.	1
PENSACOLA	6	4	4	7	.	8	3	11	4	7	5	59
PHARR	.	.	1	1	.	.	.	.	.	.	.	2
PHOENIX	1	8	5	1	.	8	3	9	9	5	4	53
PLANCKENDAEL	.	.	.	.	.	.	.	.	.	1	.	1
PLYMOUTH	.	.	.	1	1	.	.	1	1	.	.	4
POANO	.	.	.	.	1	2	6	2	5	.	.	16
POMONA	2	6	4	10	9	7	6	23	29	43	19	158
POONA	124	199	126	788	218	295	376	531	415	293	346	3711
PORTLAND	1	1	1	.	.	2	.	.	.	.	.	5
PORTSMOUTH	.	2	6	1	1	1	3	1	1	4	2	22
POTSDAM	10	14	6	7	8	8	6	5	3	10	6	83
PRAHA	1	.	.	3	2	1	3	1	.	.	.	11
PRESTON	.	.	.	1	.	1	.	.	.	.	.	2

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL	
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998		
PULLORUM	1	1	1	1	1	1	1	1	1	1	1	1	4
PUTTEN	1	1	1	4	1	1	1	8	6	5	9	37	
QUEBEC	1	1	1	1	1	1	1	1	1	1	1	1	
QUIMBAMBA	1	1	1	1	1	1	1	3	1	1	1	3	
QUINIOLA	1	1	1	1	1	1	2	1	1	1	1	8	
RAMATGAN	1	1	1	1	1	1	1	1	1	1	1	2	
RAUS	1	1	1	2	2	1	1	2	3	1	3	14	
READING	128	231	397	396	430	363	257	197	131	167	81	2778	
REDLANDS	1	1	1	1	1	1	1	1	1	1	1	4	
REGENT	1	1	1	1	1	1	1	2	1	1	1	2	
REMO	3	1	1	1	1	2	1	1	2	1	1	10	
RHODESIENSE	1	1	2	1	1	1	1	1	1	1	1	3	
RHONE	1	1	1	1	1	1	1	1	1	1	1	1	
RICHMOND	1	6	4	6	4	4	3	7	6	7	4	52	
RIED	1	1	1	1	1	1	1	1	1	1	1	1	
RIOGRANDE	1	1	1	1	1	1	1	1	1	1	1	5	
RISSEN	3	1	1	1	4	6	10	4	5	9	6	47	
ROMANBY	1	1	1	1	1	1	1	5	5	4	1	16	
ROODEPOORT	1	1	1	1	1	1	1	1	1	1	2	3	
ROSTOCK	1	2	1	1	1	1	1	1	1	1	1	3	
ROTERBERG	1	2	1	1	1	1	1	1	2	1	1	8	

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL	
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998		
ROVANIEMI	.	.	1	.	.	.	.	.	.	.	.	.	1
RUBISLAW	50	58	65	83	67	58	77	83	71	81	88	781	
RUIRU	1	.	.	.	1	.	.	.	.	.	.	2	
SAARBRUECKEN	.	.	.	.	.	.	.	.	.	.	1	1	
SABOYA	.	.	.	.	.	.	.	.	.	.	1	1	
SADA	.	.	.	1	.	.	.	.	.	.	.	1	
SAINTPAUL	650	509	558	439	529	380	479	467	562	436	479	5488	
SAKA	.	.	.	.	3	.	.	.	.	.	.	3	
SAKARAHA	.	.	.	.	.	.	.	.	.	.	1	1	
SALINATIS	3	3	.	2	2	.	1	3	3	.	.	17	
SANDIEGO	95	71	88	105	100	92	82	117	56	59	55	920	
SANDOW	.	.	.	.	3	1	2	.	.	.	.	6	
SANGALKAM	.	1	.	1	.	.	.	.	.	.	.	2	
SANGERA	.	.	.	.	.	.	2	1	.	.	.	3	
SANJUAN	.	2	1	.	.	.	.	.	.	.	.	3	
SANTIAGO	.	.	.	.	2	.	.	1	1	.	.	4	
SAO	.	.	.	.	.	.	.	.	1	.	.	1	
SAPHRA	8	15	8	10	7	1	6	11	11	41	16	134	
SARAJANE	.	.	.	.	.	.	.	.	.	.	1	1	
SCHLEISSHEIM	1	5	2	3	3	.	1	5	9	6	8	43	
SCHOENEBERG	.	.	.	.	.	.	.	.	.	1	.	1	

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
SCHWARZENGRUND	136	137	110	108	145	169	167	162	157	144	123	1558
SCHWERIN	.	.	.	.	.	.	.	.	1	.	.	1
SCULCOATES	.	.	.	.	.	.	.	.	.	.	1	1
SELANDIA	1	.	.	.	1	.	.	.	.	.	.	2
SEMINOLE	.	.	.	.	.	.	.	1	.	.	.	1
SENDAI	.	.	.	.	.	3	.	1	.	.	2	6
SENEGAL	.	.	1	.	.	.	.	.	.	.	.	1
SENFENBERG	154	119	131	140	150	126	130	91	167	180	142	1530
SEREMBAN	1	.	.	.	.	2	.	.	1	1	.	5
SERREKUNDA	.	.	.	.	.	.	.	.	.	.	1	1
SETUBAL	.	.	.	.	.	.	.	.	1	.	.	1
SHAMBA	.	.	.	.	.	.	.	.	.	1	.	1
SHANGANI	.	.	.	.	.	.	.	.	1	.	.	1
SHARON	.	.	.	.	.	.	.	1	.	.	.	1
SHIPLEY	.	.	2	.	.	.	.	.	.	.	.	2
SHOMRON	.	.	.	.	.	.	.	.	1	.	.	1
SHUBRA	1	.	6	5	2	3	3	9	2	3	4	38
SIEGBURG	2	.	.	.	.	.	.	.	.	.	.	2
SIMI	.	.	.	.	.	.	.	2	.	.	.	2
SIMSBURY	.	.	.	.	.	1	.	.	.	.	.	1
SINGAPORE	18	10	4	5	6	4	4	4	12	3	12	82

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
SINSTORF	1	1	2	1	1	2	1	9	4	8	1	31
SKANSEN	.	1	.	.	.	.	.	1	.	.	1	3
SOAHANINA	.	.	2	.	1	1	1	1	.	1	.	7
SOERENGA	.	.	.	.	.	2	1	.	6	1	.	10
SOESTERBERG	1	.	.	.	.	1	.	.	.	.	.	2
SOFIA	.	.	.	.	.	.	.	.	.	.	1	1
SOMONE	.	1	.	2	.	1	1	.	5	3	1	14
SOUMBEDIOUNE	.	.	.	.	.	.	4	.	.	.	.	4
SOUTHAMPTON	1	.	.	.	1	.	.	.	.	.	.	2
SOUTHBANK	.	.	.	.	.	.	.	.	1	.	.	1
STACHUS	.	.	.	.	.	.	.	.	1	3	.	4
STANLEY	58	93	109	131	136	143	217	481	200	164	193	1925
STANLEYVILLE	13	12	13	7	13	5	5	51	26	23	16	184
STELLINGEN	.	.	.	.	.	.	1	2	.	3	1	7
STENDAL	.	.	.	.	.	.	.	1	.	.	.	1
STERRENBOS	.	.	.	.	.	.	1	1	.	.	.	2
STEVENAGE	.	.	1	.	.	.	.	.	.	.	.	1
STIKLAND	.	.	.	.	.	.	1	.	.	.	.	1
STRASBOURG	.	.	.	.	.	.	.	.	1	.	.	1
SUBERU	.	.	.	.	.	.	.	.	.	1	1	2
SUBSPECIES I	.	.	1	.	4	2	23	26	32	22	72	182

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
SUBSPECIES II	.	2	1	12	5	10	9	7	22	8	5	81
SUBSPECIES III	.	.	.	.	.	.	.	1	3	4	1	9
SUBSPECIES IIIA	11	9	9	2	4	5	21	20	11	7	12	111
SUBSPECIES IIIA/IIIB	71	53	88	47	58	33	60	37	28	17	12	504
SUBSPECIES IIIB	12	6	15	16	9	19	21	26	13	10	7	154
SUBSPECIES IV	.	.	4	7	6	5	13	31	21	22	17	126
SUBSPECIES V	.	.	.	.	.	.	1	1	.	.	.	2
SUBSPECIES VI	.	.	.	.	.	.	.	1	1	.	.	2
SUNDSVALL	3	1	3	2	3	3	5	17	25	47	7	116
SUNNYCOVE	.	.	.	.	1	.	.	.	.	.	.	1
SYDNEY	.	.	.	.	.	.	.	1	4	1	.	6
TAKORADI	2	.	1	3	2	2	.	1	4	5	4	24
TAKSONY	.	1	.	1	.	2	.	.	5	1	.	10
TALLAHASSEE	4	1	5	6	3	8	2	6	5	18	8	66
TAMALE	.	.	.	.	.	.	1	.	2	.	.	3
TAMBACOUNDA	.	.	.	.	.	2	.	3	.	1	1	7
TAMBERMA	.	.	.	.	.	1	.	.	.	.	.	1
TANANARIVE	.	.	.	.	.	.	.	1	.	.	.	1
TANGER	.	.	.	.	.	.	.	1	.	.	.	1
TARSHYNE	.	2	.	.	.	.	.	.	.	.	.	2
TEDDINGTON	.	.	1	1	.	.	.	.	.	.	.	2

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL		
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998			
TEKO	.	.	.	.	.	.	.	.	.	.	.	.	1	1
TELAVIV	.	.	.	.	.	.	.	1	.	.	.	.	1	2
TELELKEBIR	1	6	2	1	5	5	8	4	13	12	26	83		
TENNESSEE	236	295	158	113	98	133	156	112	96	31	63	1491		
TEXAS	1	.	.	.	.	.	.	.	1	.	.	2		
THIELALLEE	.	1	.	.	.	.	.	.	.	.	.	1		
THOMASVILLE	2	1	.	.	4	1	2	1	1	2	2	16		
THOMPSON	952	925	750	716	690	576	549	625	586	695	571	7635		
TIENBA	.	.	.	.	.	.	.	.	.	.	.	1	1	
TILENE	.	.	.	.	.	.	1	4	7	2	.	14		
TOKOIN	.	.	.	.	1	.	.	3	.	.	.	4		
TOOWONG	.	.	.	.	.	.	.	.	.	1	.	1	1	
TOUCRA	.	.	.	.	.	.	2	3	3	.	.	8		
TRACHAU	.	.	.	.	1	.	.	.	.	1	.	2		
TRAVIS	.	2	.	.	.	.	.	.	.	1	.	3		
TRURO	.	.	.	1	.	.	.	.	.	.	.	1		
TSEVIE	1	.	1	.	.	.	1	1	1	.	.	5		
TSHIONGWE	1	2	2	6	2	2	3	2	4	.	.	24		
TUCSON	.	3	2	.	1	1	2	2	1	3	.	15		
TUDU	.	.	1	.	.	.	.	.	.	.	.	1		
TUINDORP	1	.	2	.	.	2	.	1	1	2	1	10		

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR												TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998		
TYGERBERG	.	.	.	.	.	1	.	2	1	.	.	.	4
TYPHI	496	544	579	500	449	472	507	442	440	349	382	5160	
TYPHIMURIUM	9716	8630	8510	8780	7720	8436	7972	9147	9002	8289	8100	94302	
TYPHIMURIUM VAR COPE	183	276	307	215	230	307	393	555	499	827	718	4510	
TYPHISUIS	.	1	.	.	.	.	.	.	.	3	.	4	
TYRESOE	.	1	.	.	.	.	.	.	1	.	.	2	
UCCLE	.	.	.	.	.	.	.	.	1	4	4	9	
UGANDA	21	14	11	21	23	29	19	28	63	51	44	324	
UGHELLI	1	.	.	.	.	.	.	.	.	.	.	1	
ULLEVI	.	.	.	.	.	.	.	.	.	1	.	1	
UMBILLO	1	1	.	.	.	.	.	.	.	.	.	2	
UNKNOWN	2246	2365	2566	2947	2136	1649	1469	952	673	382	515	17900	
UPHILL	.	.	.	.	.	.	.	.	1	.	.	1	
UPPSALA	2	1	.	.	.	.	.	1	1	.	1	6	
URBANA	26	15	18	15	26	52	63	72	60	57	46	450	
UZARAMO	.	1	1	.	3	1	1	5	.	.	3	15	
VALDOSTA	.	.	.	1	.	.	.	.	.	.	.	1	
VANCOUVER	.	.	.	.	.	1	3	1	.	.	.	5	
VEJLE	.	3	1	1	.	.	.	2	.	2	1	10	
VICTORIA	.	.	.	1	1	.	3	1	3	2	1	12	
VIETNAM	.	.	.	.	.	.	.	1	.	.	.	1	

(Continued)



TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
VILVOORDE	.	.	.	.	.	.	.	1	2	1	.	4
VIRCHOW	93	96	97	64	72	57	54	60	67	71	64	795
VIRGINIA	20	28	14	5	.	2	.	7	7	2	.	85
VOLKSDORF	.	.	.	.	.	1	1	.	2	.	.	4
VOLKSMARSDORF	.	1	.	.	.	.	.	.	.	.	.	1
VRIDI	.	.	.	.	.	.	.	1	.	.	.	1
WA	.	.	.	.	.	.	.	.	1	.	.	1
WANDSWORTH	4	2	1	2	4	1	5	14	6	5	.	44
WANGATA	.	1	1	1	2	1	1	1	.	1	1	10
WARAL	.	.	.	.	.	.	1	1	.	1	.	3
WASHINGTON	.	.	.	.	.	.	1	2	1	3	.	7
WASSENAAR	2	1	3	3	11	16	19	28	18	14	6	121
WAYCROSS	1	.	1	2	4	3	2	.	4	4	2	23
WAYNE	.	.	1	.	.	.	.	2	1	1	.	5
WELIKADE	.	1	.	.	.	.	1	.	.	1	1	4
WELTEVREDEN	98	89	65	71	68	98	86	89	86	106	67	923
WENTWORTH	.	.	1	.	.	1	.	.	.	.	.	2
WERNIGERODE	1	.	.	.	.	.	.	.	.	.	3	4
WESLACO	2	.	.	1	.	.	1	1	.	.	2	7
WESTHAMPTON	1	2	.	5	.	1	2	3	6	5	3	28
WESTON	.	.	.	1	.	.	.	.	.	.	.	1

(Continued)

TABLE 3  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND YEAR, 1988-1998

SEROTYPE	YEAR											TOTAL
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
WESTPHALIA	.	.	.	.	.	.	1	.	.	.	.	1
WICHITA	.	.	.	.	.	.	1	.	.	.	.	1
WIDEMARSH	2	.	3	1	.	.	.	.	3	2	.	11
WIEN	.	.	.	2	3	4	3	1	.	.	.	13
WIL	.	.	.	.	.	.	.	.	1	.	.	1
WILLEMSTAD	.	.	1	.	.	1	.	1	.	1	.	4
WIPPRA	.	.	.	1	.	.	2	.	.	.	.	3
WISBECH	.	.	.	.	.	.	.	.	2	.	.	2
WORTHINGTON	80	76	66	61	56	41	44	50	58	48	38	618
YABA	1	.	.	.	.	.	.	.	.	.	.	1
YARRABAH	.	.	.	.	.	.	.	.	1	.	.	1
YEERONGPILLY	.	.	.	.	.	.	.	.	1	.	.	1
YORUBA	.	.	.	.	.	.	.	.	.	.	1	1
YOVOKOME	1	.	.	.	.	.	.	.	.	.	.	1
ZAIMAN	.	.	.	.	.	.	.	1	.	.	.	1
ZANZIBAR	1	.	.	1	.	1	3	2	2	2	1	13
ZERIFIN	.	.	1	.	.	.	.	.	.	.	.	1
ZONGO	.	.	.	1	.	.	.	.	.	.	.	1
TOTAL	45410	43321	42338	40443	34688	36917	37522	41222	39035	34608	33971	429475

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=New England -----

SEROTYPE	STATE								TOTAL
	Connecticut	Maine	Massachusetts	New Hampshire	Rhode Island	Vermont			
ABAETETUBA	1	.	.	.	.	.	.	.	1
ABONY	1	.	.	.	.	.	.	.	1
ADELAIDE	2	.	1	.	.	.	.	.	3
AGONA	5	.	24	8	.	4	.	.	41
ALACHUA	.	.	1	.	.	.	.	.	1
ANATUM	1	.	3	.	.	.	.	.	4
ARECHAVALETA	.	.	.	1	.	.	.	.	1
BANANA	.	1	.	.	.	.	.	.	1
BAREILLY	.	.	3	1	.	.	.	.	4
BERTA	.	.	6	.	.	.	.	.	6
BOVISMORBIFICANS	.	.	2	.	.	.	.	.	2
BRAENDERUP	8	4	36	8	1	2	.	.	59
BRANDENBURG	3	.	4	3	.	.	.	.	10
CAMBERWELL	.	.	.	.	.	1	.	.	1
CERRO	.	.	3	.	1	.	.	.	4
CHESTER	.	.	.	1	.	.	.	.	1
CHOLERAESUIS	.	.	2	.	.	.	.	.	2
CHOLERAESUIS VAR KUN	2	.	.	.	.	.	.	.	
.	2	.	.	.	.	.	.	.	
COLINDALE	.	.	.	1	.	.	.	.	1

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=New England

SEROTYPE	STATE							TOTAL
	Connecticut	Maine	Massachusetts	New Hampshire	Rhode Island	Vermont		
CORVALLIS	1	.	.	.	.	.	1	
CUBANA	1	.	.	.	.	.	1	
DERBY	3	.	3	1	.	.	7	
DUESSELDORF	.	.	2	.	.	.	2	
EMEK	1	.	3	.	.	.	4	
ENTERITIDIS	124	7	270	34	5	20	460	
FARMSEN	.	.	.	2	.	.	2	
GAMINARA	.	.	1	.	.	.	1	
GATUNI	1	.	.	.	.	.	1	
GIVE	2	.	1	2	.	.	5	
GLOSTRUP	.	.	1	4	.	.	5	
GOLDCOAST	.	.	1	.	.	.	1	
GROUP B	.	.	12	.	1	2	15	
GROUP C1	.	.	1	.	.	1	2	
GROUP C2	2	1	.	.	.	2	5	
GROUP D1	.	.	3	.	.	.	3	
GROUP E4	1	.	.	1	.	.	2	
GROUP F	.	.	.	1	.	.	1	
GROUP I	.	.	1	.	.	.	1	
HADAR	8	.	20	5	.	.	33	

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=New England -----

SEROTYPE	STATE									TOTAL
	Connecticut	Maine	Massachusetts	New Hampshire	Rhode Island	Vermont				
HARTFORD	5	.	22	1	.	.				28
HAVANA	2	1	2	1	.	.				6
HAYINDOGO	.	.	.	.	.	.			1	1
HEIDELBERG	29	7	86	14	1	2				139
HVITTINGFOSS	.	.	2	.	.	.				2
IBADAN	4	.	2	.	.	.				6
INFANTIS	6	.	17	8	.	.				31
IRUMU	.	.	1	.	.	.				1
IV 44:Z4,Z23:-	1	.	1	.	.	.				2
JAVA	.	.	2	3	1	.				6
JAVIANA	2	1	16	5	.	1				25
KENTUCKY	2	.	2	.	1	.				5
KRALENDYK	.	1	.	.	.	.				1
LINDENBURG	.	1	.	.	.	.				1
LITCHFIELD	2	.	3	.	.	2				7
LIVINGSTONE	.	.	1	.	.	.				1
LONDON	1	.	2	.	.	1				4
MANHATTAN	.	1	.	.	.	.				1
MARINA	.	.	2	.	.	.				2
MBANDAKA	2	.	6	1	.	.				9

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=New England -----

SEROTYPE	STATE								TOTAL
	Connecticut	Maine	Massachusetts	New Hampshire	Rhode Island	Vermont			
MELEAGRIS	.	.	1	.	.	.	.	.	1
MIAMI	5	.	13	1	.	.	.	.	19
MINNESOTA	.	.	1	.	.	.	.	.	1
MISSISSIPPI	1	.	3	.	1	.	.	.	5
MONTEVIDEO	9	.	30	4	.	.	.	.	43
MUENCHEN	10	2	41	8	.	.	.	.	61
MUENSTER	1	.	5	1	.	.	.	1	8
NEWBRUNSWICK	.	.	3	.	.	.	.	.	3
NEWPORT	16	4	48	4	1	.	2	.	75
NOTTINGHAM	.	.	2	.	.	.	.	.	2
OHIO	2	1	4	.	.	.	.	.	7
ORANIENBURG	8	2	18	3	1	.	2	.	34
PANAMA	3	1	6	.	.	.	1	.	11
PARATYPHI A	2	.	6	.	.	.	.	.	8
PARATYPHI B	6	.	12	.	.	.	.	.	18
POONA	8	3	9	.	1	.	.	.	21
PORTSMOUTH	.	.	2	.	.	.	.	.	2
PUTTEN	.	.	2	.	.	.	1	.	3
READING	4	.	2	1	.	.	.	.	7
REMO	.	.	.	.	.	.	1	.	1

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=New England -----

SEROTYPE	STATE								TOTAL
	Connecticut	Maine	Massachusetts	New Hampshire	Rhode Island	Vermont			
RISSSEN	1	.	.	.	.	.	.	.	1
SAINTPAUL	9	3	34	2	.	.	.	9	57
SAKARAH	.	.	1	.	.	.	.	.	1
SANDIEGO	3	.	5	2	.	.	.	.	10
SCHWARZENGRUND	2	.	8	.	.	.	.	.	10
SENFTEMBERG	3	.	7	.	.	.	.	.	10
SHUBRA	.	.	1	.	.	.	.	.	1
STANLEY	3	.	8	2	1	.	.	.	14
SUBSPECIES I	.	.	3	.	.	.	.	.	3
SUBSPECIES IV	.	.	1	.	.	.	.	.	1
SUNDSVALL	.	.	1	.	.	.	.	.	1
TAKORADI	1	.	.	.	1	.	.	.	2
TALLAHASSEE	.	.	.	1	.	.	.	.	1
TELELKEBIR	2	.	.	.	.	.	.	.	2
TENNESSEE	.	.	1	.	.	.	.	.	1
THOMPSON	3	3	23	4	1	2	.	.	36
TYPHI	8	.	15	2	.	.	.	.	25
TYPHIMURIUM	146	25	316	48	16	56	.	.	607
TYPHIMURIUM VAR COPE	.	.	125	23	.	.	.	.	148

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=New England -----

SEROTYPE	STATE							TOTAL
	Connecticut	Maine	Massachusetts	New Hampshire	Rhode Island	Vermont		
UGANDA	.	.	2	.	.	.	.	2
UNKNOWN	8	.	2	4	1	1	1	16
URBANA	.	.	5	.	.	.	.	5
VIRCHOW	1	.	4	.	.	.	.	5
WANGATA	.	.	1	.	.	.	.	1
WASSENAAR	1	.	.	.	.	.	.	1
WELTEVREDEN	2	.	1	1	.	.	.	4
WORTHINGTON	2	.	.	.	1	.	.	3
TOTAL	493	69	1343	217	36	115	2273	



TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=Mid Atlantic .....

SERO TYPE	STATE			TOTAL
	New Jersey	New York	Pennsylvania	
AARHUS	1	.	.	1
ABAETETUBA	.	1	1	2
ABERDEEN	.	1	.	1
ADELAIDE	10	10	1	21
AGAMA	1	.	.	1
AGO	.	1	.	1
AGONA	32	85	56	173
ALACHUA	.	2	1	3
ALBANY	.	.	2	2
AMAGER	1	.	.	1
AMSTERDAM	.	.	1	1
ANATUM	7	6	5	18
ANTSALOVA	.	.	1	1
BANCO	.	.	2	2
BARDO	1	1	.	2
BAREILLY	2	2	1	5
BERE	.	.	1	1
BERTA	3	10	11	24
BINZA	.	.	1	1
BLEGDAM	1	.	.	1

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=Mid Atlantic .....

SEROTYPE	STATE			TOTAL
	New Jersey	New York	Pennsylvania	
BLOCKLEY	2	7	.	9
BONARIENSIS	2	2	.	4
BOVISMORBIFICANS	7	6	1	14
BRAENDERUP	22	22	14	58
BRANCASTER	.	1	.	1
BRANDBURG	8	10	7	25
BREDENEY	2	1	2	5
BRONX	.	2	.	2
BUZU	.	1	.	1
CERRO	.	4	.	4
CHAILEY	.	.	1	1
CHAMELEON	.	1	.	1
CHESTER	.	4	.	4
CHOLERAESUJS	.	1	3	4
CHOLERAESUJS VAR KUN	2	.	.	2
COLINDALE	.	1	.	1
CUBANA	1	2	1	4
DERBY	3	8	1	12
DIGUEL	.	1	.	1

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=Mid Atlantic .....

SEROTYPE	STATE			TOTAL
	New Jersey	New York	Pennsylvania	
DJUGU	.	1	.	1
DUBLIN	1	3	.	4
DUESSELDORF	2	1	.	3
DURBAN	1	.	.	1
EALING	.	2	.	2
EASTBOURNE	1	.	1	2
EDINBURG	.	1	.	1
ENTERITIDIS	403	807	460	1670
ESSEN	.	2	.	2
FLORIDA	2	1	.	3
GAMINARA	1	1	.	2
GIVE	1	7	2	10
GROUP 51	1	.	.	1
GROUP 60	.	1	.	1
GROUP B	27	48	.	75
GROUP C1	.	13	.	13
GROUP C2	3	5	.	8
GROUP D1	.	5	.	5
GROUP D2	1	.	.	1
GROUP D3	2	.	.	2

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=Mid Atlantic .....

SERO TYPE	STATE			TOTAL
	New Jersey	New York	Pennsylvania	
GROUP E1	.	2	.	2
GROUP H	.	1	.	1
GROUP I	1	2	.	3
GROUP O	.	.	1	1
GROUP V	.	1	.	1
GROUP Z	3	1	.	4
HADAR	45	68	39	152
HARTFORD	1	10	10	21
HAVANA	3	1	.	4
HEIDELBERG	119	266	90	475
HVITTINGFOSS	1	.	1	2
I 4,5,12:I:-	.	24	.	24
INFANTIS	14	21	29	64
INVERNESS	1	1	.	2
IRUMU	1	.	1	2
ISANGI	.	1	1	2
ISTANBUL	1	1	.	2
IV 44:Z4,Z23:-	1	1	.	2
JANGWANI	.	.	1	1
JAVA	5	6	23	34

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=Mid Atlantic .....

SEROTYPE	STATE			TOTAL
	New Jersey	New York	Pennsylvania	
JAVIANA	18	21	19	58
JOHANNESBURG	1	2	.	3
KEDUGOU	1	.	.	1
KENTUCKY	6	16	2	24
KINGSTON	.	.	1	1
KISARAWA	.	.	1	1
KRALENDYK	.	.	1	1
KUA	.	.	1	1
LAMBERHURST	.	.	1	1
LANDWASSER	1	.	.	1
LIMETE	1	.	.	1
LITCHFIELD	4	6	16	26
LIVINGSTONE	1	.	.	1
LOMALINDA	1	.	.	1
LONDON	1	.	2	3
MANHATTAN	4	4	6	14
MARINA	.	1	5	6
MATOPENI	.	1	.	1
MBANDAKA	6	9	12	27
MELEAGRIDIS	.	.	2	2

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=Mid Atlantic .....

SEROTYPE	STATE			TOTAL
	New Jersey	New York	Pennsylvania	
MIAMI	5	5	2	12
MISSISSIPPI	.	8	4	12
MONTEVIDEO	15	46	28	89
MOSCOW	4	.	.	4
MUENCHEN	12	14	22	48
MUENSTER	6	5	9	20
NEWBRUNSWICK	1	.	.	1
NEWHAW	1	.	.	1
NEWPORT	46	45	44	135
NORWICH	3	.	2	5
OHIO	8	6	5	19
ORANIENBURG	13	25	28	66
OSLO	.	1	.	1
OUDWIJK	.	.	1	1
OVERSCHIE	.	3	.	3
PANAMA	5	10	2	17
PARATYPHI A	6	14	2	22
PARATYPHI B	2	7	.	9
PARERA	.	1	.	1
POMONA	.	2	3	5

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=Mid Atlantic .....

SEROTYPE	STATE			TOTAL
	New Jersey	New York	Pennsylvania	
POONA	10	25	11	46
PUTTEN	.	1	.	1
QUEBEC	.	1	.	1
READING	4	5	3	12
RICHMOND	2	1	.	3
ROMANBY	.	1	.	1
RUBISLAW	2	4	1	7
SAARBRUECKEN	.	1	.	1
SABOYA	.	1	.	1
SAINTPAUL	20	18	38	76
SANDIEGO	.	1	2	3
SCHLEISSHEIM	1	.	.	1
SCHWARZENGRUND	8	10	1	19
SENFENBERG	7	25	6	38
SERREKUNDA	.	1	.	1
SINGAPORE	.	3	.	3
SINSTORF	.	.	1	1
SKANSEN	.	1	.	1
SOMONE	.	1	.	1
STANLEY	11	11	6	28

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=Mid Atlantic .....

SEROTYPE	STATE			TOTAL
	New Jersey	New York	Pennsylvania	
STANLEYVILLE	3	9	1	13
SUBSPECIES I	21	1	.	22
SUBSPECIES II	1	.	.	1
SUBSPECIES IIIA	.	1	.	1
SUBSPECIES IV	1	1	.	2
SUNDSVALL	.	1	1	2
TELELKEBIR	1	1	.	2
TENNESSEE	2	.	1	3
THOMASVILLE	.	1	.	1
THOMPSON	25	41	19	85
TYPHI	18	76	7	101
TYPHIMURIUM	163	753	415	1331
TYPHIMURIUM VAR COPE	175	.	.	175
UGANDA	.	4	1	5
UNKNOWN	.	57	.	57
URBANA	.	5	10	15
UZARAMO	.	.	2	2
VIRCHOW	4	8	.	12
WASSENAAR	1	.	.	1

(Continued)



TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=Mid Atlantic .....

SEROTYPE	STATE			TOTAL
	New Jersey	New York	Pennsylvania	
WAYCROSS	.	1	.	1
WELTEVREDEN	4	.	2	6
WESTHAMPTON	.	1	.	1
WORTHINGTON	2	3	1	6
YORUBA	.	1	.	1
ZANZIBAR	1	.	.	1
TOTAL	1409	2826	1523	5758

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=East North Central -----

SEROTYPE	STATE					TOTAL
	Illinois	Indiana	Michigan	Ohio	Wisconsin	
ADELAIDE	.	1	6	3	.	10
AGONA	119	55	48	67	28	317
AGUEVE	.	1	.	1	.	2
AJIORO	.	.	.	.	1	1
ALACHUA	1	.	.	.	.	1
ALBANY	2	.	1	1	4	8
AMSTERDAM	.	.	.	1	.	1
ANATUM	7	4	2	3	3	19
ANTSALOVA	.	.	.	1	.	1
BAILDON	.	1	.	2	.	3
BARDO	.	1	.	.	.	1
BAREILLY	8	1	21	1	1	32
BERKELEY	.	.	1	.	.	1
BERTA	9	2	3	5	.	19
BLOCKLEY	2	2	2	2	3	11
BONARIENSIS	1	.	.	.	.	1
BONN	1	.	.	.	.	1
BOVISMORBIFICANS	9	3	6	.	.	18
BRAENDERUP	28	14	7	6	2	57
BRANDENBURG	10	2	4	2	1	19

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=East North Central -----

SEROTYPE	STATE					TOTAL
	Illinois	Indiana	Michigan	Ohio	Wisconsin	
BREDENEY	3	.	.	3	.	6
CALABAR	.	.	.	.	1	1
CANNSTATT	.	.	1	.	.	1
CERRO	.	.	.	2	.	2
CHAILEY	2	.	.	.	1	3
CHAMELEON	.	1	.	.	2	3
CHESTER	.	.	2	3	.	5
CHOLERAESUIS	2	.	1	.	2	5
CHOLERAESUIS VAR KUN	.	.	1	.	.	1
COELN	.	.	1	.	.	1
COLINDALE	1	.	.	.	.	1
CUBANA	3	.	.	3	1	7
DECATUR	.	.	.	.	1	1
DERBY	7	6	3	7	1	24
DUBLIN	.	.	1	1	.	2
DURBAN	.	1	.	.	.	1
EALING	1	1	.	.	.	2
EASTBOURNE	1	.	.	.	.	1
EMEK	.	.	.	.	1	1

(continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=East North Central -----

SEROTYPE	STATE					TOTAL
	Illinois	Indiana	Michigan	Ohio	Wisconsin	
ENTERITIDIS	373	83	237	252	106	1051
FARMOSEN	.	.	.	1	.	1
FLINT	1	.	.	1	.	2
GAMINARA	.	.	2	.	2	4
GIVE	4	1	3	1	2	11
GOETTINGEN	.	.	1	.	.	1
GROUP 51	.	1	.	.	.	1
GROUP 58	.	1	.	.	.	1
GROUP 61	.	.	1	1	.	2
GROUP B	50	15	.	7	10	82
GROUP C1	2	4	.	4	.	10
GROUP C2	1	.	.	1	1	3
GROUP D1	2	.	.	2	2	6
GROUP H	1	.	.	.	.	1
GROUP I	.	.	.	1	.	1
GROUP K	.	.	.	1	.	1
GROUP N	.	.	.	1	.	1
GROUP V	.	1	.	2	1	4
GROUP X	.	1	.	.	.	1
GROUP Z	.	.	1	.	.	1

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=East North Central -----

SEROTYPE	STATE						TOTAL
	Illinois	Indiana	Michigan	Ohio	Wisconsin		
HADAR	39	7	11	8	2		67
HARTFORD	11	5	15	13	2		46
HAVANA	1	1	4	.	.		6
HEIDELBERG	93	41	67	65	27		293
HOUTEN	.	.	.	.	3		3
HVITTINGFOSS	1	.	1	.	1		3
IBADAN	.	.	.	1	.		1
IDIKAN	.	.	1	.	.		1
INFANTIS	63	9	9	10	2		93
IRUMU	.	.	.	.	1		1
ISANGI	.	.	1	1	.		2
IV 44:Z4,Z23:-	1	.	.	.	.		1
JANGWANI	.	1	.	.	.		1
JAVA	36	14	30	19	5		104
JAVIANA	12	6	15	31	4		68
JOHANNESBURG	4	.	.	1	.		5
KAMBOLE	1	.	.	.	.		1
KENTUCKY	.	3	2	2	.		7
KIAMBU	1	.	1	.	.		2
KINONDONI	.	.	1	.	.		1

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=East North Central -----

SEROTYPE	STATE					TOTAL
	Illinois	Indiana	Michigan	Ohio	Wisconsin	
KINTAMBO	.	.	1	.	.	1
KRALENDYK	1	1	2	.	.	4
LITCHFIELD	4	6	1	4	2	17
LIVINGSTONE	.	.	.	1	.	1
LONDON	2	.	3	.	1	6
LUCIANA	.	.	.	1	.	1
MADELIA	.	1	.	.	.	1
MAGWA	.	.	1	.	.	1
MANHATTAN	14	3	5	3	1	26
MARINA	1	.	2	7	2	12
MATADI	.	2	.	.	.	2
MBANDAKA	2	3	9	3	2	19
MELEAGRIDS	2	.	1	.	1	4
MIAMI	3	.	2	1	1	7
MISSISSIPPI	.	1	.	.	.	1
MONSCHAUI	.	.	.	1	.	1
MONTEVIDEO	52	8	18	21	16	115
MUENCHEN	23	5	16	11	2	57
MUENSTER	4	.	3	3	.	10
NCHANGA	.	.	.	.	1	1

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=East North Central

SEROTYPE	STATE					TOTAL
	Illinois	Indiana	Michigan	Ohio	Wisconsin	
NEWINGTON	2	.	.	.	.	2
NEWPORT	60	16	24	39	17	156
NORWICH	1	1	2	1	.	5
OHIO	7	.	1	2	.	10
OLDENBURG	.	.	.	.	1	1
ORANIENBURG	27	13	50	59	4	153
OSLO	1	.	.	.	1	2
PANAMA	2	2	4	1	2	11
PARATYPHI A	8	3	2	2	.	15
PARATYPHI B	1	2	8	11	1	23
POONA	18	4	15	11	4	52
PUTTEN	1	.	.	.	.	1
RAUS	.	.	.	2	.	2
READING	6	1	6	2	4	19
ROTERBERG	1	.	.	.	.	1
RUBISLAW	1	.	1	2	.	4
SAINTPAUL	21	6	10	14	4	55
SANDIEGO	1	1	2	2	1	7
SCHWARZENGRUND	5	7	3	5	2	22
SENDAI	.	.	.	.	1	1

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=East North Central -----

SEROTYPE	STATE						TOTAL
	Illinois	Indiana	Michigan	Ohio	Wisconsin		
SENFTEMBERG	7	.	1	1	3		12
SHUBRA	.	.	.	.	1		1
SINGAPORE	.	.	1	.	.		1
STANLEY	6	7	11	6	2		32
STANLEYVILLE	.	.	.	.	1		1
SUBSPECIES I	.	2	.	.	.		2
SUBSPECIES II	.	.	.	.	2		2
SUBSPECIES IIIA	.	.	.	.	1		1
SUBSPECIES IIIB	.	.	.	.	1		1
SUBSPECIES IV	.	1	.	.	1		2
TELELKEBIR	.	.	1	.	1		2
TENNESSEE	2	2	.	.	2		6
THOMPSON	30	2	32	13	11		88
TYPHI	28	2	4	8	1		43
TYPHIMURIUM	310	74	306	347	190		1227
TYPHIMURIUM VAR COPE	.	49	.	.	.		49
UGANDA	6	.	.	1	2		9
UNKNOWN	6	3	34	8	1		52
URBANA	6	.	1	3	2		12

(continued)



TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=East North Central -----

SEROTYPE	STATE					TOTAL
	Illinois	Indiana	Michigan	Ohio	Wisconsin	
VIRCHOW	.	2	3	4	1	10
WASSENAAR	.	.	1	1	1	3
WELTEVREDEN	4	3	.	.	.	7
WORTHINGTON	1	.	1	.	.	2
TOTAL	1591	523	1102	1141	519	4876

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=West North Central

SERO TYPE	STATE										TOTAL		
	Iowa	Kansas	Minnesota	Missouri	Nebraska	North Dakota	South Dakota						
AARHUS	.	.	2	.	.	.	.	.	.	.	.	.	2
ADELAIDE	.	1	.	.	.	.	.	.	.	.	.	.	1
AGONA	14	23	30	64	.	4	1						136
ALACHUA	.	.	2	.	.	.	.	.	.	.	.	.	2
ALBANY	1	.	.	.	.	.	.	.	.	.	.	.	1
ANATUM	1	2	2	3	.	.	.	.	.	.	.	.	8
ANECHO	.	.	1	.	.	.	.	.	.	.	.	.	1
ARECHAVALETA	1	.	.	.	.	.	.	.	.	.	.	.	1
BARDO	3	.	.	.	.	.	.	.	.	.	.	.	3
BAREILLY	1	2	2	6	.	.	2						13
BERTA	.	.	1	1	.	.	.	.	.	.	.	.	2
BLEGDAM	.	1	.	.	.	.	.	.	.	.	.	.	1
BLOCKLEY	.	.	4	1	.	.	.	.	.	.	.	.	5
BOVISMORBIFICANS	.	1	3	.	.	.	2						6
BRADFORD	.	.	.	.	.	.	1						1
BRAENDERUP	4	.	42	7	.	.	.						53
BRANDENBURG	2	.	5	7	.	.	.						14
BREDENEY	1	.	3	1	.	.	.						5
CERRO	.	.	2	1	.	.	.						3
CHAMELEON	.	.	2	.	.	.	.						2

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=West North Central

SEROTYPE	STATE										TOTAL	
	Iowa	Kansas	Minnesota	Missouri	Nebraska	North Dakota	South Dakota					
CHESTER	.	.	.	1	.	.	.	.	.	.	.	1
CHOLERAESUIS	.	1	1	.	.	.	.	.	.	.	.	2
CHOLERAESUIS VAR KUN	3	.	1	.	.	.	.	.	.	.	.	4
CUBANA	.	.	1	.	.	.	.	.	.	.	.	1
DERBY	1	.	4	1	.	2	4	.	.	.	.	12
DRYPOOL	.	1	.	.	.	.	.	.	.	.	.	1
DUBLIN	.	.	1	.	.	.	1	.	.	.	1	2
DUESSELDORF	.	1	3	.	.	.	.	.	.	.	.	4
DURBAN	.	.	.	.	.	.	.	.	.	.	1	1
EMEK	.	.	1	.	.	.	.	.	.	.	.	1
ENTERITIDIS	38	27	63	71	.	5	9	.	.	.	.	213
GABON	.	.	.	.	.	.	.	.	.	.	1	1
GIVE	2	.	3	.	.	.	.	.	.	.	.	5
GLOSTRUP	.	.	1	.	.	.	.	.	.	.	.	1
GROUP 53	.	.	.	2	.	.	.	.	.	.	.	2
GROUP 57	.	.	.	1	.	.	.	.	.	.	.	1
GROUP B	14	.	3	56	33	.	.	.	.	.	.	106
GROUP C1	.	.	.	1	2	.	.	.	.	.	.	3
GROUP C2	.	.	1	.	1	.	.	.	.	.	.	2

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=West North Central

SEROTYPE	STATE										TOTAL	
	Iowa	Kansas	Minnesota	Missouri	Nebraska	North Dakota	South Dakota					
GROUP D1	.	.	1	3	3	.	.	.	.	7		
GROUP E1	.	.	1	.	.	.	.	.	.	1		
GROUP E4	.	.	1	.	.	.	.	.	.	1		
GROUP G	.	.	.	1	.	.	.	.	.	1		
GROUP I	.	.	.	1	.	.	.	.	.	1		
GROUP K	.	.	1	.	.	.	.	.	.	1		
HADAR	4	2	19	15	.	.	.	.	5	45		
HAIFA	.	.	1	.	.	.	.	.	.	1		
HARLEYSTREET	.	.	.	.	.	.	.	.	1	1		
HARTFORD	2	.	2	5	.	.	.	.	.	9		
HAVANA	1	.	.	.	.	.	.	.	.	1		
HEIDELBERG	32	8	50	49	.	.	.	.	10	156		
HVITTINGFOSS	.	.	1	.	.	.	.	.	.	1		
II 50:B:Z6	.	.	.	1	.	.	.	.	.	1		
INFANTIS	4	5	8	9	.	.	.	.	.	26		
INVERNESS	.	.	.	1	.	.	.	.	.	1		
JAVA	2	.	8	18	.	.	.	.	.	28		
JAVIANA	1	7	6	23	.	.	.	.	.	37		
JOHANNESBURG	2	.	.	.	.	.	.	.	.	2		
KENTUCKY	2	.	.	1	.	.	.	.	.	3		

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=West North Central

SEROTYPE	STATE										TOTAL		
	Iowa	Kansas	Minnesota	Missouri	Nebraska	North Dakota	South Dakota						
KIAMBU	.	.	1	.	.	.	.	.	.	.	.	.	1
KINTAMBO	1	.	1	2	.	.	.	.	.	.	.	.	4
KRALENDYK	.	.	.	2	.	.	.	.	.	.	.	.	2
LANKA	1	.	.	.	.	.	.	.	.	.	.	.	1
LINDENBURG	.	1	.	.	.	.	.	.	.	.	.	.	1
LITCHFIELD	.	.	4	5	.	.	1	.	.	.	.	.	10
LOMALINDA	.	.	.	4	.	.	.	.	.	.	.	.	4
MANHATTAN	.	.	1	5	.	.	.	.	.	.	.	.	6
MARINA	.	1	.	.	.	.	4	.	.	.	.	.	5
MBANDAKA	4	3	7	3	.	.	.	.	.	.	.	.	17
MELEAGRIDIS	2	.	.	.	.	.	.	.	.	.	.	.	2
MIAMI	1	.	1	1	.	.	.	.	.	.	.	.	3
MINNESOTA	.	1	.	.	.	.	.	.	.	.	.	.	1
MISSISSIPPI	.	.	.	2	.	.	.	.	.	.	.	.	2
MONO	1	.	.	.	.	.	.	.	.	.	.	.	1
MONTEVIDEO	22	3	15	11	.	.	4	.	.	.	.	.	55
MUENCHEN	6	4	9	26	.	.	2	.	.	.	.	.	47
MUENSTER	1	.	3	1	.	.	4	.	.	.	.	.	9
NEWPORT	11	37	30	73	.	.	7	.	.	.	.	.	165
NIMA	.	1	.	.	.	.	.	.	.	.	.	.	1

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=West North Central -----

SEROTYPE	STATE										TOTAL	
	Iowa	Kansas	Minnesota	Missouri	Nebraska	North Dakota	South Dakota					
NORWICH	.	1	1	9	.	.	.	.	.	.	.	11
OHIO	.	.	.	2	.	.	.	.	.	.	2	4
ORANIENBURG	3	12	6	22	.	.	.	.	.	.	4	47
OSLO	.	1	1	.	.	.	.	.	.	.	.	2
PANAMA	.	.	5	.	.	.	.	.	.	.	.	5
PARATYPHI A	.	.	1	2	.	.	.	.	.	.	1	4
PARATYPHI B	1	1	.	.	.	.	.	.	3	.	4	9
POONA	2	8	6	29	.	.	.	.	.	.	.	45
POTSDAM	.	.	.	1	.	.	.	.	.	.	.	1
PUTTEN	.	.	.	1	.	.	.	.	.	.	.	1
READING	2	1	1	5	.	.	.	.	1	.	2	12
ROODEPOORT	.	.	2	.	.	.	.	.	.	.	.	2
SAINTPAUL	3	3	8	8	.	.	.	.	3	.	1	26
SANDIEGO	.	.	.	1	.	.	.	.	.	.	.	1
SARAJANE	.	.	.	.	.	.	.	.	1	.	.	1
SCHWARZENGRUND	1	1	1	1	.	.	.	.	.	.	.	4
SENFTEMBERG	.	1	3	2	.	.	.	.	.	.	.	6
STANLEY	2	3	3	6	.	.	.	.	1	.	1	16
STELLINGEN	.	.	.	1	.	.	.	.	.	.	.	1
SUBSPECIES I	.	.	2	.	.	.	.	.	1	.	.	3

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=West North Central

SEROTYPE	STATE										TOTAL		
	Iowa	Kansas	Minnesota	Missouri	Nebraska	North Dakota	South Dakota						
SUBSPECIES II	.	.	1	.	.	.	.	.	.	.	.	.	1
SUBSPECIES IIIA	.	2	4	.	.	.	.	.	.	.	.	.	6
SUBSPECIES IIIA/IIIB	3	.	.	.	.	.	.	.	.	.	.	.	3
SUBSPECIES IIIB	.	.	1	.	.	.	.	.	.	.	.	.	1
SUBSPECIES IV	.	.	3	.	.	.	.	.	.	.	.	.	3
SUNDSVALL	1	.	.	.	.	.	.	.	.	.	.	.	1
TAMBACOUNDA	.	1	.	.	.	.	.	.	.	.	.	.	1
TELELKEBIR	.	.	.	3	.	.	.	.	.	.	.	.	3
TENNESSEE	.	.	1	1	.	.	.	.	.	.	.	.	2
THOMPSON	9	4	22	15	.	.	.	.	.	.	3	.	53
TYPHI	1	.	5	4	.	.	.	.	.	.	.	.	10
TYPHIMURIUM	64	99	203	249	.	.	.	.	.	25	64	.	704
TYPHIMURIUM VAR COPE	16	2	8	.	.	.	.	.	.	.	.	.	26
UGANDA	.	.	2	.	.	.	.	.	.	.	.	.	2
UNKNOWN	.	2	12	2	8	.	.	.	.	.	.	.	24
URBANA	1	.	.	.	.	.	.	.	.	.	.	.	1
VIRCHOW	.	.	1	2	.	.	.	.	.	.	.	.	3
WELIKADE	.	.	1	.	.	.	.	.	.	.	.	.	1
WELTEVREDEN	.	.	1	2	.	.	.	.	.	.	.	.	3

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=West North Central -----

SEROTYPE	STATE								TOTAL
	Iowa	Kansas	Minnesota	Missouri	Nebraska	North Dakota	South Dakota		
WORTHINGTON	.	.	.	2	.	.	.	.	2
TOTAL	295	275	660	856	47	68	134		2335



TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=South Atlantic .....

SEROTYPE	STATE										TOTAL
	Delaware	Florida	Georgia	Maryland	North Carolina	South Carolina	Virginia	West Virginia			
AARHUS	.	1	2	.	.	.	.	.	.	.	3
ABAEETUBA	.	.	1	.	.	.	.	.	.	.	1
ABONY	.	.	2	.	.	.	.	.	.	.	2
ADELAIDE	.	1	2	.	2	.	.	3	2	.	10
AFRICANA	.	.	.	2	.	.	.	.	.	.	2
AGAMA	.	.	.	.	1	.	.	.	.	.	1
AGONA	1	1	23	12	.	4	.	8	.	8	57
AJIOBO	.	1	.	.	.	.	.	.	.	.	1
ALABAMA	.	.	1	.	.	.	.	.	.	.	1
ALACHUA	.	1	.	.	1	.	.	.	.	.	2
ALBANY	.	.	1	.	.	.	.	.	.	.	1
ANATUM	.	3	4	5	3	1	.	3	.	.	19
ANECHO	.	.	1	.	.	.	.	.	.	.	1
ARAGUA	.	.	.	.	1	.	.	.	.	.	1
BAILDON	.	.	4	.	.	.	.	4	.	.	8
BAREILLY	.	.	10	2	9	4	.	7	1	1	33
BENFICA	.	.	1	.	.	.	.	.	.	.	1
BERTA	.	1	4	7	21	2	10	2	2	2	47
BLOCKLEY	.	1	1	.	.	2	.	.	.	.	4

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=South Atlantic .....

SEROTYPE	STATE										TOTAL	
	Delaware	Florida	Georgia	Maryland	North Carolina	South Carolina	Virginia	West Virginia				
BOCHUM	.	.	.	5	.	.	.	.	.	.	.	5
BONARIENSIS	.	.	.	.	1	.	.	.	.	.	.	1
BOVISMORBIFICANS	.	.	4	.	.	.	.	.	.	.	.	4
BRAENDERUP	3	6	27	13	6	3	21	4				83
BRANDENBURG	2	2	8	3	16	3	2	.				36
BREDENEY	.	.	2	1	.	.	.	.	.	.	.	3
BUZU	.	1	.	2	.	.	.	.	.	.	.	3
CARRAU	.	2	.	.	1	.	.	.	.	.	.	3
CERRO	.	2	1	.	1	.	2	.				6
CHAILEY	.	.	.	.	1	.	.	.	.	.	.	1
CHAMIELEON	.	.	.	1	.	.	.	.	.	.	.	1
CHESTER	.	.	1	1	3	.	.	.	.	.	.	5
CHINCOL	.	.	.	.	1	.	.	.	.	.	.	1
CHOLERAESUIS	.	.	3	1	.	.	1	.				5
COLINDALE	.	.	.	1	.	.	.	.	.	.	.	1
COLORADO	.	.	.	.	2	.	.	.	.	.	.	2
CONCORD	.	.	2	.	.	.	.	.	.	.	.	2
CUBANA	1	3	3	13	.	.	.	.	.	.	.	20
DECATUR	.	.	1	.	.	.	.	.	.	.	.	1

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=South Atlantic

SEROTYPE	STATE										TOTAL		
	Delaware	Florida	Georgia	Maryland	North Carolina	South Carolina	Virginia	West Virginia					
DENVER	.	.	.	.	.	.	.	1	.	.	1	.	1
DERBY	.	1	.	8	13	2	8	.	.	.	32	.	32
DUBLIN	.	.	.	.	.	.	.	1	.	.	2	1	2
DUESSELDORF	.	1	.	.	.	.	.	.	.	.	1	.	1
DURBAN	.	.	.	2	.	.	.	.	.	.	2	.	2
DUVAL	.	.	1	.	.	.	.	.	.	.	1	.	1
EALING	.	.	.	.	.	.	.	.	.	2	2	.	2
EASTBOURNE	.	.	1	.	1	.	.	.	.	.	2	.	2
ENTERITIDIS	28	8	50	251	87	8	223	33	.	.	688	.	688
FARMSEN	.	.	.	.	.	1	.	.	.	.	1	.	1
FISCHERKIETZ	.	.	.	1	.	.	.	.	.	.	1	.	1
FLINT	.	51	.	.	1	.	.	.	.	.	52	.	52
FLORIDA	.	3	1	.	.	.	1	.	.	.	5	.	5
FLUNTERN	.	3	.	.	.	.	.	.	.	.	3	.	3
FYRIS	.	.	.	.	.	.	.	.	.	.	1	1	1
GAMINARA	.	5	2	.	3	4	.	.	.	.	14	.	14
GATOW	.	.	.	.	1	1	.	.	.	.	2	.	2
GEORGIA	.	.	.	1	.	1	.	.	.	.	2	.	2
GIVE	.	1	6	.	.	1	1	.	.	1	9	.	9

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=South Atlantic .....

SEROTYPE	STATE										TOTAL
	Delaware	Florida	Georgia	Maryland	North Carolina	South Carolina	Virginia	West Virginia			
GLOSTRUP	.	.	2	.	.	.	.	.	.	.	2
GROUP 60	.	.	1	.	.	.	.	.	.	.	1
GROUP 61	1	.	.	.	.	.	.	.	.	.	1
GROUP B	.	40	3	11	.	.	14	.	.	.	68
GROUP C1	.	7	1	.	.	.	4	.	.	.	12
GROUP C2	.	20	.	.	.	.	.	.	.	.	20
GROUP D1	.	31	1	4	2	.	.	.	.	.	38
GROUP E1	.	3	.	1	.	.	1	.	.	.	5
GROUP F	.	1	.	.	.	.	.	.	.	.	1
GROUP G	.	2	.	.	.	.	.	.	.	.	2
GROUP I	.	.	2	1	.	.	.	.	.	.	3
GROUP K	.	1	.	.	.	.	.	.	.	.	1
GROUP L	.	.	1	.	.	.	.	.	.	.	1
GROUP P	.	1	.	.	.	.	.	.	.	.	1
GROUP Q	.	1	.	.	.	.	.	.	.	.	1
GROUP R	.	1	.	.	.	.	.	.	.	.	1
GROUP V	.	.	.	3	.	.	.	.	.	.	3
GROUP W	.	1	.	.	1	.	.	.	.	.	2
GROUP X	.	.	1	.	.	.	.	.	.	.	1

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=South Atlantic

SEROTYPE	STATE										TOTAL	
	Delaware	Florida	Georgia	Maryland	North Carolina	South Carolina	Virginia	West Virginia				
GROUP Y	.	1	.	.	.	.	.	.	.	.	.	1
GRUMPENSIS	1	.	.	.	.	.	.	.	.	.	.	1
HADAR	2	.	14	18	24	6	18	2				84
HAIFA	.	.	.	.	1	.	.	.	.	.	.	1
HARTFORD	.	2	12	8	3	3	9	3				40
HAVANA	.	2	3	8	4	1	3	.				21
HEIDELBERG	5	4	73	41	70	38	43	7				281
HIDUDDIFY	.	.	.	.	3	.	.	.	.	.	.	3
HOMOSASSA	.	2	.	.	.	.	.	.	.	.	.	2
HOUTEN	.	.	.	.	2	.	.	.	.	.	.	2
HVITTINGFOSS	.	.	.	2	.	2	1	.				5
I 4,5,12:I:-	.	.	10	.	.	.	.	.	.	.	.	10
IBADAN	.	.	.	2	15	.	.	.	.	.	.	17
II 50:B:Z6	1	.	.	.	.	.	.	.	.	.	.	1
IIIB 61:1,V:1,5,7	.	.	1	.	.	.	.	.	.	.	.	1
INDIANA	.	.	.	1	.	.	1	.	.	.	.	2
INFANTIS	3	3	19	12	21	2	7	5				72
INVERNESS	2	2	8	.	6	.	.	.	.	.	.	18
IRUMU	.	.	2	.	1	.	.	.	.	.	.	3

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=South Atlantic .....

SEROTYPE	STATE										TOTAL
	Delaware	Florida	Georgia	Maryland	North Carolina	South Carolina	Virginia	West Virginia			
ITURI	.	.	.	.	3	.	.	.	.	.	3
IV 44:Z4,Z23:-	1	.	.	.	.	.	.	.	.	.	1
JAMAICA	.	.	.	.	.	.	.	.	1	.	1
JANGWANI	.	1	.	.	.	.	.	.	.	.	1
JAVA	.	1	9	2	13	1	17	1	.	.	44
JAVIANA	3	73	151	13	181	76	25	.	.	.	522
JODHPUR	.	.	.	1	.	.	.	.	.	.	1
JOHANNESBURG	.	2	5	.	2	1	.	.	.	.	10
KENTUCKY	.	.	.	.	1	.	.	.	.	.	1
KIAMBU	.	.	2	.	1	1	.	.	.	.	4
KILWA	.	.	.	.	1	.	.	.	.	.	1
KINTAMBO	.	.	1	2	1	.	.	.	.	.	4
KISARAWA	.	.	1	.	.	.	.	.	.	.	1
KOKOLI	.	.	.	.	1	.	.	.	.	.	1
KOKOMLEMLE	.	1	.	.	.	.	.	.	.	.	1
KOTTBUS	.	.	1	.	.	.	.	.	.	.	1
LAMIN	.	.	1	.	.	.	.	.	.	.	1
LINDENBURG	2	.	.	.	.	.	.	.	.	.	2
LITCHFIELD	1	4	3	2	7	2	.	.	.	.	19

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=South Atlantic .....

SEROTYPE	STATE										TOTAL	
	Delaware	Florida	Georgia	Maryland	North Carolina	South Carolina	Virginia	West Virginia				
LOCKLEAZE	.	.	.	1	.	.	.	.	.	.	.	1
LOMALINDA	.	.	3	.	.	.	.	.	.	.	.	3
LONDON	.	.	1	.	1	1	.	.	.	.	.	3
LOVELACE	.	.	.	.	1	.	.	.	.	.	.	1
MADELIA	.	.	2	.	.	.	4	.	.	.	.	6
MANHATTAN	.	.	.	3	.	.	3	.	.	3	1	10
MARINA	1	1	1	3	1	.	.	.	1	.	1	9
MATOPENI	1	.	.	.	.	.	.	.	.	.	.	1
MBANDAKA	.	1	5	.	4	1	.	.	5	1	.	17
MELEAGRIDIS	.	.	1	.	.	1	.	.	.	.	.	2
MENDOZA	.	.	.	.	.	.	.	.	.	.	1	1
MIAMI	.	18	7	6	11	5	.	.	2	.	.	49
MINNESOTA	.	.	1	.	.	.	.	.	.	.	.	1
MISSISSIPPI	.	20	79	.	7	29	.	.	1	.	.	136
MONTEVIDEO	1	6	43	6	29	14	.	.	12	.	.	111
MOUNTPLEASANT	.	.	.	1	.	.	.	.	.	.	.	1
MUENCHEN	1	17	61	17	35	43	.	.	12	3	.	189
MUENSTER	.	.	1	.	3	1	.	.	1	.	.	6
NEUBRUNSWICK	.	.	.	.	.	.	.	.	1	.	.	1

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=South Atlantic .....

SEROTYPE	STATE										TOTAL		
	Delaware	Florida	Georgia	Maryland	North Carolina	South Carolina	Virginia	West Virginia					
NEWINGTON	.	.	.	.	.	.	.	.	.	.	1	.	1
NEWPORT	10	51	250	38	249	99	67	4					768
NEWROCHELLE	.	.	.	.	1	.	.	.	.	.	.	.	1
NIMA	.	.	.	1	.	.	.	.	.	.	.	.	1
NORWICH	.	.	1	1	1	.	3	1					7
OHIO	.	1	.	1	2	.	3	4					11
ORANIENBURG	.	3	16	13	11	7	11	.					61
OSLO	.	.	1	2	1	.	3	.					7
OTHMARSCHEN	.	.	.	.	.	.	.	.					4
PANAMA	.	.	1	1	3	.	3	.					8
PARATYPHI A	.	.	1	.	.	.	3	1					5
PARATYPHI B	.	1	1	5	1	2	.	3					13
PENSACOLA	.	.	.	.	1	1	1	.					3
POMONA	.	.	.	1	2	.	.	.					3
POONA	.	9	14	5	8	3	3	.					42
POTSDAM	.	.	1	.	1	.	.	.					2
PUTTEN	.	1	.	.	.	.	.	.					1
READING	.	.	.	.	4	.	2	.					6
RISSEN	.	.	.	1	.	.	1	.					2

(Continued)



TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=South Atlantic .....

SEROTYPE	STATE										TOTAL
	Delaware	Florida	Georgia	Maryland	North Carolina	South Carolina	Virginia	West Virginia			
RUBISLAW	.	30	8	.	3	2	2	.	45		
SAINTPAUL	2	11	33	9	12	6	2	2	77		
SANDIEGO	.	7	.	1	.	.	1	.	9		
SAPHRA	.	.	1	.	.	.	.	.	1		
SCHLEISSHEIM	.	.	2	.	.	.	.	.	2		
SCHWARZENGRUND	.	.	26	3	4	.	7	.	40		
SENDAI	.	.	1	.	.	.	.	.	1		
SENFENBERG	1	.	.	.	1	1	1	.	4		
SHUBRA	.	.	.	.	.	.	1	.	1		
SINGAPORE	.	.	.	.	.	.	2	.	2		
STANLEY	.	3	4	4	4	2	5	2	24		
STANLEYVILLE	.	.	.	.	1	.	1	.	2		
SUBERU	.	.	1	.	.	.	.	.	1		
SUBSPECIES I	.	2	34	.	.	.	.	.	36		
SUBSPECIES IIIA	.	1	1	.	.	.	2	.	4		
SUBSPECIES IIIA/IIIB	.	.	.	.	2	2	.	1	5		
SUBSPECIES IV	.	.	1	.	.	.	5	1	7		
SUNDSVALL	.	1	.	.	.	.	.	.	1		
TAKORADI	.	.	.	2	.	.	.	.	2		

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=South Atlantic .....

SEROTYPE	STATE										TOTAL
	Delaware	Florida	Georgia	Maryland	North Carolina	South Carolina	Virginia	West Virginia			
TALLAHASSEE	.	.	2	.	1	.	.	.	.	3	
TEKO	.	.	.	1	.	.	.	.	.	1	
TELAVIV	.	1	.	.	.	.	.	.	.	1	
TELELKEBIR	.	1	2	.	1	.	.	.	.	4	
TENNESSEE	1	.	6	16	.	1	7	.	.	31	
THOMPSON	1	1	23	31	13	2	9	1	.	81	
TIENBA	.	.	.	.	1	.	.	.	.	1	
TYPHI	3	12	6	11	3	.	2	1	.	38	
TYPHIMURIUM	46	38	433	233	453	124	243	59	.	1629	
TYPHIMURIUM VAR COPE	.	.	.	7	.	.	.	.	.	7	
UGANDA	.	.	.	2	5	.	.	.	.	7	
UNKNOWN	.	33	1	.	7	20	6	3	.	70	
UPPSALA	.	.	1	.	.	.	.	.	.	1	
URBANA	.	2	.	2	1	.	.	.	.	5	
VIRCHOW	.	.	2	2	1	.	1	.	.	6	
WAYCROSS	.	.	1	.	.	.	.	.	.	1	
WELTEVREDEN	.	.	.	1	1	.	2	.	.	4	
WERNIGERODE	.	.	.	3	.	.	.	.	.	3	
WORTHINGTON	.	.	.	.	.	1	.	.	.	1	

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

..... REGION=South Atlantic .....

	STATE							TOTAL	
	Delaware	Florida	Georgia	Maryland	North Carolina	South Carolina	Virginia		West Virginia
TOTAL	125	578	1578	898	1432	544	880	164	6199

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=East South Central -----

SEROTYPE	STATE				TOTAL
	Alabama	Kentucky	Mississippi	Tennessee	
AARIUS	1	.	.	.	1
ABERDEEN	.	.	1	.	1
ADELAIDE	.	.	.	2	2
AGONA	11	3	.	8	22
AGOUVEVE	.	.	.	1	1
ALABAMA	.	.	.	1	1
ALACHUA	.	.	.	1	1
ALAMO	1	.	.	.	1
ALBANY	.	.	.	1	1
ALLANDALE	.	.	.	1	1
ANATUM	1	.	.	4	5
BAILDON	.	1	.	45	46
BAREILLY	1	.	1	17	19
BERTA	.	1	.	.	1
BOVISMORBIFICANS	.	1	.	2	3
BRAENDERUP	4	2	.	26	32
BRANDENBURG	3	1	.	3	7
BRENENEY	75	.	.	.	75
CERRO	.	.	.	1	1

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=East South Central

SEROTYPE	STATE				TOTAL
	Alabama	Kentucky	Mississippi	Tennessee	
CHOLERAESUIS VAR KUN	.	.	.	1	1
CUBANA	1	.	.	2	3
DAYTONA	1	1	.	.	2
DERBY	1	3	2	6	12
DOULASSAME	.	1	.	.	1
EASTBOURNE	.	.	.	3	3
ENTERITIDIS	22	12	.	59	93
GAMABA	1	.	.	.	1
GAMINARA	3	.	.	1	4
GIVE	4	.	1	1	6
GROUP B	13	.	8	21	42
GROUP C1	7	.	1	3	11
GROUP C2	.	.	1	.	1
GROUP D1	7	.	3	2	12
GROUP F	.	.	3	.	3
GROUP G	2	.	1	2	5
GROUP K	1	.	.	.	1
GROUP R	.	.	.	2	2
GROUP Y	.	.	.	3	3

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=East South Central

SEROTYPE	STATE				TOTAL
	Alabama	Kentucky	Mississippi	Tennessee	
HADAR	3	2	.	7	12
HARTFORD	1	2	.	7	10
HEIDELBERG	24	5	6	46	81
HINDMARSH	1	.	.	.	1
IBADAN	1	.	.	.	1
INFANTIS	3	4	.	3	10
INVERNESS	1	.	.	.	1
ITAMI	.	.	8	.	8
IV 45:G,Z51:-	.	.	.	1	1
JAVA	.	3	2	9	14
JAVIANA	44	2	.	22	68
JOHANNESBURG	2	.	.	5	7
KINTAMBO	.	2	.	1	3
KUNDUCHI	.	.	1	.	1
LAROCHELLE	.	.	1	.	1
LINDENBURG	1	.	.	.	1
LITCHFIELD	2	1	.	5	8
LUCIANA	.	.	1	.	1
MANHATTAN	.	.	1	.	1
MARINA	.	1	.	3	4

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=East South Central

SEROTYPE	STATE				TOTAL
	Alabama	Kentucky	Mississippi	Tennessee	
MBANDAKA	8	.	.	1	9
MIAMI	1	.	.	2	3
MINNESOTA	.	.	.	1	1
MISSISSIPPI	19	1	16	18	54
MONTEVIDEO	21	1	2	13	37
MUENCHEN	38	2	1	5	46
MUENSTER	.	.	.	1	1
NEWPORT	40	7	28	68	143
NORWICH	8	.	3	13	24
OHIO	1	.	.	1	2
ORANIENBURG	3	4	.	7	14
OSLO	1	.	.	.	1
PANAMA	5	1	.	2	8
PENSACOLA	.	.	.	1	1
POONA	1	2	.	5	8
POTSDAM	.	.	.	1	1
READING	.	.	2	1	3
RUBISLAW	1	.	5	.	6
SAINTPAUL	4	1	2	10	17
SANDIEGO	.	.	.	1	1

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=East South Central

SEROTYPE	STATE				TOTAL
	Alabama	Kentucky	Mississippi	Tennessee	
SCHLEISSHEIM	5	.	.	.	5
SCHWARZENGRUND	3	1	.	4	8
SCULCOATES	.	.	1	.	1
SENFENBERG	.	.	.	2	2
STANLEY	.	.	.	3	3
SUBSPECIES I	.	.	.	1	1
SUBSPECIES II	.	.	.	1	1
SUBSPECIES IIIB	.	.	.	1	1
SUBSPECIES IV	.	1	.	.	1
TALLAHASSEE	.	.	.	1	1
TELELKEBIR	.	.	.	2	2
TENNESSEE	.	.	.	1	1
THOMPSON	2	4	.	9	15
TYPHI	3	.	.	6	9
TYPHIMURIUM	148	29	35	204	416
TYPHIMURIUM VAR COPE	.	16	3	.	19
UCCLE	1	.	.	.	1
UGANDA	1	.	.	.	1
UNKNOWN	16	6	22	2	46

(Continued)



TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=East South Central -----

SEROTYPE	STATE				TOTAL
	Alabama	Kentucky	Mississippi	Tennessee	
URBANA	1	.	.	.	1
VIRCHOW	.	.	.	3	3
WESTHAMPTON	1	.	.	.	1
WORTHINGTON	1	.	.	.	1
TOTAL	576	124	162	719	1581

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=West South Central -----

SEROTYPE	STATE				TOTAL
	Arkansas	Louisiana	Oklahoma	Texas	
ABAETETUBA	.	.	.	1	1
ADELAIDE	.	.	.	4	4
AGONA	4	8	9	43	64
ALACHUA	.	1	.	.	1
AMSTERDAM	.	.	1	.	1
ANATUM	.	5	1	16	22
ARECHAVALETA	.	.	1	.	1
ARKANSAS	2	.	.	.	2
ATHINAI	.	.	1	.	1
BAREILLY	18	12	.	5	35
BERTA	.	.	.	2	2
BLOCKLEY	.	7	.	4	11
BOVISMORBIFICANS	.	.	.	2	2
BRAENDERUP	.	17	6	37	60
BRANDENBURG	.	2	.	1	3
BRENENEY	1	.	4	3	8
CERRO	.	.	.	5	5
CHESTER	.	.	.	4	4
CHOLERAESUITS VAR KUN	.	1	.	.	1

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=West South Central

SERO TYPE	STATE				TOTAL
	Arkansas	Louisiana	Oklahoma	Texas	
CUBANA	1	.	.	3	4
DERBY	.	2	.	2	4
DUESSELDORF	.	.	.	4	4
ENTERITIDIS	6	22	15	114	157
GALLINARUM	.	.	1	.	1
GAMINARA	1	18	.	11	30
GIVE	.	19	1	11	31
GLOSTRUP	.	.	.	1	1
GROUP B	.	17	8	22	47
GROUP C1	.	2	4	16	22
GROUP C2	.	.	.	2	2
GROUP D1	.	4	3	2	9
GROUP E1	.	1	.	3	4
GROUP E2	.	.	1	1	2
GROUP F	.	.	.	1	1
GROUP G	.	1	4	2	7
HADAR	2	8	2	12	24
HARTFORD	.	7	.	1	8
HAVANA	1	.	.	1	2
HEIDELBERG	13	19	4	43	79

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=West South Central

SEROTYPE	STATE				TOTAL
	Arkansas	Louisiana	Oklahoma	Texas	
HVITTINGFOSS	.	4	.	3	7
IBADAN	5	.	.	9	14
INDIANA	.	.	1	.	1
INFANTIS	1	34	2	104	141
INVERNESS	.	3	.	3	6
ITURI	.	1	.	.	1
JAVA	3	1	.	.	4
JAVIANA	40	88	2	149	279
JOHANNESBURG	.	.	.	1	1
KENTUCKY	.	.	.	4	4
KIAMBU	.	.	.	3	3
KINTAMBO	.	.	.	2	2
LANGENSALZA	.	.	.	1	1
LAROCHELLE	3	.	2	.	5
LINDENBURG	.	.	.	5	5
LITCHFIELD	1	5	.	5	11
LONDON	.	2	2	.	4
LUCIANA	.	1	.	.	1
MADELIA	.	.	1	3	4
MANHATTAN	3	.	.	2	5

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=West South Central

SERO TYPE	STATE				TOTAL
	Arkansas	Louisiana	Oklahoma	Texas	
MARINA	.	.	.	2	2
MARYLAND	.	.	.	1	1
MBANDAKA	.	7	2	8	17
MELEAGRIDIS	.	.	4	.	4
MENDOZA	.	.	2	.	2
MIAMI	.	.	.	1	1
MINNESOTA	.	.	.	4	4
MISSISSIPPI	2	76	.	23	101
MONO	.	.	1	.	1
MONTEVIDEO	6	31	3	76	116
MUENCHEN	3	28	2	47	80
MUENSTER	2	.	.	3	5
NEWBRUNSWICK	1	.	.	5	6
NEWINGTON	.	.	.	8	8
NEWPORT	139	133	35	257	564
NORWICH	5	3	1	2	11
OHIO	.	.	.	1	1
ORANIENBURG	.	19	11	76	106
OSLO	.	2	.	.	2
PANAMA	2	1	.	7	10

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=West South Central

SEROTYPE	STATE				TOTAL
	Arkansas	Louisiana	Oklahoma	Texas	
PARATYPHI A	.	2	.	4	6
PARATYPHI B	.	3	8	16	27
PHOENIX	.	.	.	4	4
POMONA	.	.	.	1	1
POONA	2	3	3	36	44
POTSDAM	.	1	.	.	1
QUINIELA	.	1	.	.	1
RAUS	.	.	.	1	1
READING	.	2	.	1	3
RICHMOND	.	.	1	.	1
RISSEN	.	.	1	.	1
RUBISLAW	5	5	.	13	23
SAINTPAUL	1	2	9	13	25
SANDIEGO	.	.	.	6	6
SAPHRA	.	10	.	4	14
SCHWARZENGRUND	.	2	1	.	3
SENFTEMBERG	.	.	.	7	7
SHUBRA	.	.	1	.	1
SINGAPORE	.	.	1	2	3
STANLEY	.	5	1	6	12

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=West South Central

SEROTYPE	STATE				TOTAL
	Arkansas	Louisiana	Oklahoma	Texas	
SUBSPECIES I	.	.	1	.	1
SUBSPECIES IIIA/IIIB	.	.	.	1	1
SUBSPECIES IIIB	.	.	1	.	1
SUBSPECIES IV	.	.	.	1	1
TENNESSEE	.	.	.	1	1
THOMASVILLE	.	.	.	1	1
THOMPSON	5	11	3	39	58
TYPHI	.	2	1	21	24
TYPHIMURIUM	91	117	59	295	562
UGANDA	.	1	.	5	6
UNKNOWN	11	23	5	92	131
URBANA	.	2	.	.	2
VIRCHOW	.	1	4	2	7
WELTEVREDEN	.	.	.	1	1
WESLACO	.	.	.	1	1
WORTHINGTON	.	.	.	2	2
TOTAL	380	805	237	1770	3192

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=Mountain -----

SEROTYPE	STATE										TOTAL	
	Arizona	Colorado	Idaho	Montana	Nevada	New Mexico	Utah	Wyoming				
ABERDEEN	.	1	.	.	.	.	.	.	.	.	.	1
ABONY	2	.	.	.	.	.	.	.	.	.	.	2
ADELAIDE	.	.	.	.	1	.	.	.	.	.	.	1
AGONA	.	.	5	.	5	4	3	.	.	.	.	17
ANATUM	.	3	.	.	1	6	.	.	.	.	.	10
BAILDON	1	.	.	.	.	.	.	.	.	.	.	1
BAREILLY	.	1	.	.	1	.	.	.	.	.	.	2
BERTA	.	.	.	.	.	1	.	.	.	.	.	1
BIRKENHEAD	2	.	.	.	.	.	.	.	.	.	.	2
BLEDGAM	.	.	.	.	.	1	.	.	.	.	.	1
BLOCKLEY	7	6	.	.	.	.	1	.	.	.	.	14
BOVISMORBIFICANS	.	.	.	.	.	2	1	.	.	.	.	3
BRAENDERUP	5	6	1	.	4	.	.	.	.	.	.	16
BRANDENBURG	1	.	.	.	.	1	.	.	.	.	.	2
BREDENEY	.	1	.	.	.	.	.	.	.	.	.	1
BROOKLYN	.	.	.	.	.	.	1	.	.	.	.	1
CALIFORNIA	3	.	.	.	.	.	.	.	.	.	.	3
CERRO	2	1	1	.	1	5	2	.	.	.	.	12
CHESTER	.	.	.	.	1	.	1	.	.	.	.	2

(Continued)



TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=Mountain

SEROTYPE	STATE										TOTAL		
	Arizona	Colorado	Idaho	Montana	Nevada	New Mexico	Utah	Wyoming					
CHOLERAESUIS VAR KUN	.	1	.	.	.	.	.	.	.	.	.	.	1
CUBANA	3	.	.	.	.	2	.	.	.	.	2	.	7
DERBY	17	8	.	.	.	.	.	.	.	.	.	.	25
DRYPOOL	2	1	.	.	.	.	.	.	.	.	.	.	3
DUBLIN	19	.	1	.	3	.	.	.	.	.	.	.	23
DUESSELDORF	.	1	.	.	.	.	.	.	.	.	.	.	1
ENTERITIDIS	133	92	19	.	81	31	201	.	.	.	.	.	557
FLINT	.	.	.	.	.	.	1	.	.	.	.	.	1
GAMINARA	.	.	.	.	.	.	1	.	.	.	.	.	1
GIVE	.	.	.	.	1	.	.	.	.	.	.	.	1
GROUP 58	.	.	.	.	.	.	1	.	.	.	.	.	1
GROUP 61	.	.	.	.	.	.	1	.	.	.	.	.	1
GROUP A	.	.	.	2	.	.	.	.	.	.	.	.	2
GROUP B	.	.	.	28	1	1	13	25	.	.	.	.	68
GROUP C1	.	1	.	4	1	.	.	4	.	.	.	.	10
GROUP C2	.	.	.	3	.	.	1	5	.	.	.	.	9
GROUP D1	.	.	.	6	.	.	.	27	.	.	.	.	33
GROUP E1	.	.	1	.	.	.	.	.	.	.	.	.	1
GROUP G	.	1	.	.	.	.	.	.	.	.	.	.	1

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=Mountain

SEROTYPE	STATE										TOTAL		
	Arizona	Colorado	Idaho	Montana	Nevada	New Mexico	Utah	Wyoming					
GROUP S	.	.	.	.	.	.	.	.	.	.	1	.	1
HADAR	17	5	.	.	1	10	3	.	.	.	.	.	36
HARTFORD	1	3	1	.	.	1	.	.	.	.	.	.	6
HAVANA	4	1	.	.	1	1	3	.	.	.	.	.	10
HEIDELBERG	13	29	5	.	12	12	6	.	.	.	.	.	77
HINDMARSH	.	.	2	.	.	.	.	.	.	.	.	.	2
HVITTINGFOSS	.	1	.	.	.	.	.	.	.	.	.	.	1
II 50:B:Z6	.	.	.	.	.	.	1	.	.	.	1	.	1
INFANTIS	9	6	.	.	1	7	10	.	.	.	.	.	33
IRUMU	.	2	.	.	.	.	.	.	.	.	.	.	2
IV 45:G,Z51:-	.	.	1	.	.	.	.	.	.	.	.	.	1
JAVA	.	1	.	.	5	.	.	.	.	.	.	.	6
JAVIANA	23	18	2	.	2	21	4	.	.	.	.	.	70
KENTUCKY	1	1	.	.	.	.	.	.	.	.	.	.	2
KINSHASA	.	1	.	.	.	.	.	.	.	.	.	.	1
KINTAMBO	3	.	.	.	.	.	.	.	.	.	.	.	3
KOTTBUS	1	.	.	.	.	.	.	.	.	.	.	.	1
KRALENDYK	2	1	.	.	1	.	.	.	.	.	.	.	4
LITCHFIELD	2	1	1	.	1	.	1	.	.	.	1	.	6
LIVINGSTONE	.	.	.	.	.	.	1	.	.	.	1	.	1

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=Mountain

SEROTYPE	STATE										TOTAL	
	Arizona	Colorado	Idaho	Montana	Nevada	New Mexico	Utah	Wyoming				
LOMALINDA	.	2	1	.	.	.	.	.	.	.	.	3
LOMITA	3	.	.	.	.	.	.	.	.	.	.	3
LONDON	.	1	.	.	.	.	.	.	.	.	.	1
MANHATTAN	1	1	.	.	.	.	.	.	.	.	.	2
MBANDAKA	5	1	.	.	.	2	1	.	.	.	.	9
MELEAGRIDIS	.	.	.	.	.	.	5	.	.	.	.	5
MIAMI	.	1	.	.	.	.	.	.	.	.	.	1
MINNESOTA	.	.	1	.	.	.	.	.	.	.	.	1
MONTEVIDEO	13	36	1	.	14	12	7	.	.	.	.	83
MUENCHEN	20	5	1	.	8	8	1	.	.	.	.	43
MUENSTER	.	2	.	.	.	.	.	.	.	.	.	2
NEUBRUNSWICK	4	.	.	.	.	.	.	.	.	.	.	4
NEWINGTON	10	1	.	.	.	.	.	.	.	.	.	11
NEWPORT	53	20	2	.	2	18	7	.	.	.	.	102
NORWICH	2	.	.	.	1	.	.	.	.	.	.	3
OHIO	.	5	.	.	.	.	5	.	.	.	.	10
ORANIENBURG	29	18	.	.	2	24	6	.	.	.	.	79
OSLO	.	1	.	.	.	.	.	.	.	.	.	1
OTHMARSCHEN	.	.	3	.	.	.	.	.	.	.	.	3
PANAMA	13	.	.	.	1	3	2	.	.	.	.	19

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=Mountain

SEROTYPE	STATE										TOTAL		
	Arizona	Colorado	Idaho	Montana	Nevada	New Mexico	Utah	Wyoming					
PARATYPHI A	.	2	.	.	.	.	.	.	.	.	.	.	2
PARATYPHI B	8	2	.	.	13	1	2	.	.	.	.	.	26
POMONA	.	.	.	.	.	.	1	.	.	.	.	.	1
POONA	28	2	1	.	.	1	5	.	.	.	.	.	37
READING	2	.	1	.	1	.	1	.	.	.	.	.	5
SAINTPAUL	10	10	4	.	2	7	4	.	.	.	.	.	37
SANDIEGO	1	.	1	.	.	.	3	.	.	.	.	.	5
SCHWARZENGRUND	1	3	.	.	.	1	.	.	.	.	.	.	5
SENFENBERG	4	1	.	.	2	.	2	.	.	.	.	.	9
STANLEY	5	5	.	.	1	1	1	.	.	.	.	.	13
SUBSPECIES I	.	.	1	.	.	.	.	.	.	.	.	.	1
SUBSPECIES III	.	.	.	.	1	.	.	.	.	.	.	.	1
SUBSPECIES IIIA/IIIB	.	.	.	.	.	3	.	.	.	.	.	.	3
SUBSPECIES IIIB	.	1	.	.	.	.	.	.	.	.	.	.	1
TALLAHASSEE	3	.	.	.	.	.	.	.	.	.	.	.	3
TENNESSEE	3	2	1	.	.	.	1	.	.	.	1	.	7
THOMPSON	5	21	.	.	1	1	11	.	.	.	.	.	39
TYPHI	4	1	1	.	2	2	.	.	.	.	.	.	10
TYPHIMURIUM	202	164	38	.	33	45	60	.	.	.	.	.	542

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=Mountain

SEROTYPE	STATE										TOTAL	
	Arizona	Colorado	Idaho	Montana	Nevada	New Mexico	Utah	Wyoming				
TYPHIMURIUM VAR COPE	.	.	.	.	12	22	.	.	.	.	.	34
UCCLE	.	1	.	.	.	1	.	.	.	.	.	2
UGANDA	.	1	.	.	.	.	.	.	.	.	.	1
UNKNOWN	.	.	.	.	4	5	.	.	.	.	.	9
URBANA	.	.	.	.	.	.	.	.	3	.	.	3
VEJLE	1	.	.	.	.	.	.	.	.	.	.	1
VICTORIA	1	.	.	.	.	.	.	.	.	.	.	1
VIRCHOW	.	.	1	.	.	.	.	.	.	.	.	1
WELTEVREDEN	2	2	.	.	.	.	.	.	1	.	.	5
WESLACO	.	.	.	.	.	1	.	.	.	.	.	1
WORTHINGTON	1	1	.	.	1	.	.	.	.	.	.	3
TOTAL	707	507	98	43	226	264	389	61				2295

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=Pacific -----

SEROTYPE	STATE						TOTAL
	Alaska	California	Hawaii	Oregon	Washington		
AARHUS	.	2	.	.	.	.	2
ABAETETUBA	.	2	.	.	.	.	2
ABERDEEN	.	1	.	.	.	.	1
ABONY	.	1	.	.	.	.	1
ADELAIDE	.	20	.	.	.	.	20
AGONA	1	110	10	11	32		164
AGOUVEVE	.	1	.	.	.	2	3
ALACHUA	.	3	.	.	.	.	3
ALBANY	.	9	.	.	.	1	10
AMAGER	.	.	2	.	.	.	2
AMSTERDAM	.	1	1	.	.	.	2
ANATUM	.	28	.	2	3		33
ARECHAVALETA	.	1	.	.	.	.	1
BAILDON	.	15	.	.	.	.	15
BARDO	.	3	.	.	.	.	3
BAREILLY	.	7	.	1	2		10
BERTA	.	19	1	.	1		21
BIRKENHEAD	.	.	2	.	.	.	2
BLOCKLEY	.	4	1	1	1		7
BOVISMORBIFICANS	.	7	2	2	1		12

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=Pacific -----

SEROTYPE	STATE						TOTAL
	Alaska	California	Hawaii	Oregon	Washington		
BRAENDERUP	1	63	1	7	7	79	
BRANDENBURG	.	9	.	1	6	16	
BRENENEY	.	9	.	.	.	9	
CERRO	.	14	1	.	.	15	
CHAILEY	.	4	.	.	.	4	
CHAMELEON	.	1	.	.	.	1	
CHESTER	.	.	.	1	1	2	
CHICAGO	.	.	.	1	.	1	
CHOLERAESUJIS	.	4	1	.	.	5	
CHOLERAESUJIS VAR KUN	.	.	.	1	.	1	
CLAIBORNEI	.	1	.	.	.	1	
COELN	.	3	1	.	.	4	
CUBANA	.	24	1	.	.	25	
DAYTONA	.	.	.	.	1	1	
DERBY	.	36	4	.	3	43	
DUBLIN	.	32	2	3	8	45	
DURBAN	.	3	.	2	.	5	
EMEK	.	.	1	.	.	1	
ENTERITIDIS	1	944	75	48	72	1140	

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=Pacific

SEROTYPE	STATE						TOTAL
	Alaska	California	Hawaii	Oregon	Washington		
GAMINARA	.	4	.	.	1		5
GIVE	.	8	4	.	2		14
GLOSTRUP	.	1	.	.	.		1
GROUP 61	.	.	.	.	1		1
GROUP B	.	22	6	1	.		29
GROUP C1	.	1	.	.	1		2
GROUP C2	.	.	1	.	.		1
GROUP E1	.	.	1	.	.		1
GROUP G	.	.	1	.	.		1
GROUP I	.	34	.	1	.		35
GROUP V	.	.	.	1	.		1
GROUP W	.	.	.	1	.		1
GROUP Z	.	1	.	.	.		1
HAARDT	.	2	.	.	.		2
HADAR	2	68	2	5	14		91
HAIFA	.	.	.	.	1		1
HARTFORD	.	2	.	1	4		7
HAVANA	.	23	1	.	3		27
HEIDELBERG	4	237	11	14	53		319
HEILBRON	.	.	.	1	.		1

(Continued)



TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=Pacific -----

SEROTYPE	STATE						TOTAL
	Alaska	California	Hawaii	Oregon	Washington		
HOUTEN	.	.	1	.	.	.	1
HVITTINGFOSS	.	4	.	1	2		7
INDIANA	.	2	.	1	1		4
INFANTIS	.	110	4	3	13		130
INVERNESS	.	.	.	3	1		4
IRUMU	.	5	.	.	1		6
ISANGI	.	1	.	.	.		1
ISTANBUL	.	5	.	.	.		5
ITURI	.	.	.	.	1		1
JANGWANI	.	2	.	.	.		2
JAVA	.	.	.	8	.		8
JAVIANA	.	24	2	7	7		40
JOHANNESBURG	.	4	.	.	.		4
KENTUCKY	.	12	.	.	.		12
KIAMBU	.	3	.	.	.		3
KINTAMBO	.	3	.	.	.		3
KRALENDYK	.	2	.	.	.		2
LABADI	.	1	.	.	.		1
LITCHFIELD	.	12	.	.	3		15
LIVINGSTONE	.	.	.	.	1		1

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=Pacific -----

SEROTYPE	STATE						TOTAL
	Alaska	California	Hawaii	Oregon	Washington		
LOMALINDA	1	4	.	.	.	.	5
LONDON	.	5	.	1	.	1	7
MADELIA	.	1	.	.	.	.	1
MANHATTAN	.	7	.	1	.	.	8
MARINA	.	7	.	.	.	.	7
MATADI	.	2	.	.	.	.	2
MBANDAKA	.	16	.	2	.	5	23
MELEAGRIDIS	.	19	.	.	.	.	19
MIAMI	.	2	.	.	.	2	4
MICHIGAN	.	2	.	.	.	.	2
MINNESOTA	.	8	.	.	.	.	8
MISSISSIPPI	.	1	.	.	.	2	3
MOLADE	.	1	.	.	.	.	1
MONSCHAUI	.	2	.	.	.	.	2
MONTEVIDEO	.	129	9	10	31	7	179
MUENCHEN	1	47	9	4	7	.	68
MUENSTER	.	6	.	.	1	.	7
NEWBRUNSWICK	.	20	.	1	.	.	21
NEWINGTON	.	3	.	.	.	.	3
NEWPORT	.	109	29	12	14	14	164

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=Pacific -----

SEROTYPE	STATE						TOTAL
	Alaska	California	Hawaii	Oregon	Washington		
NIMA	.	3	.	.	.	.	3
NORWICH	.	1	.	.	.	.	1
OHIO	.	14	.	1	.	.	15
ORANIENBURG	.	98	.	12	23	.	133
ORIENTALIS	.	.	.	.	1	.	1
ORION	.	.	.	.	1	.	1
OSLO	.	6	7	.	2	.	15
PANAMA	.	26	1	.	3	.	30
PARATYPHI A	.	17	2	.	4	.	23
PARATYPHI B	.	43	11	2	8	.	64
PARERA	.	1	.	2	.	.	3
PENSACOLA	.	.	1	.	.	.	1
POMONA	.	9	.	.	.	.	9
POONA	.	35	1	7	8	.	51
POTSDAM	.	1	.	.	.	.	1
PUTTEN	.	2	.	.	.	.	2
READING	.	10	1	.	3	.	14
RISSEN	.	.	.	.	2	.	2
RUBISLAW	.	3	.	.	.	.	3
SAINTPAUL	.	74	6	15	14	.	109

(Continued)

TABLE 4  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

REGION=Pacific

SERTYPE	STATE						TOTAL
	Alaska	California	Hawaii	Oregon	Washington		
SANDIEGO	1	11	.	1	.		13
SAPHRA	.	1	.	.	.		1
SCHWARZENGRUND	.	5	1	3	3		12
SENFENBERG	.	51	.	.	3		54
SINGAPORE	.	3	.	.	.		3
SOFIA	.	.	.	1	.		1
STANLEY	1	37	.	6	7		51
SUBSPECIES I	2	.	.	1	.		3
SUBSPECIES IIIB	.	.	.	.	2		2
SUNDSVALL	.	1	.	.	1		2
TELELKEBIR	.	11	.	.	.		11
TENNESSEE	.	8	.	2	1		11
THOMPSON	2	94	2	3	15		116
TUINDORP	.	1	.	.	.		1
TYPHI	.	113	3	.	6		122
TYPHIMURIUM	20	638	54	128	242		1082
TYPHIMURIUM VAR COPE	.	260	.	.	.		260
UCCLE	.	1	.	.	.		1
UGANDA	.	11	.	.	.		11

(Continued)

TABLE 4  
 SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
 BY SEROTYPE, GEOGRAPHIC REGION AND STATE, 1998

----- REGION=Pacific -----

SEROTYPE	STATE						TOTAL
	Alaska	California	Hawaii	Oregon	Washington		
UNKNOWN	.	91	1	2	16		110
URBANA	.	1	.	1	.		2
UZARAMO	.	1	.	.	.		1
VIRCHOW	.	14	1	.	2		17
WASSENAAR	.	1	.	.	.		1
WELTEVREDEN	.	6	30	.	1		37
WESTHAMPTON	.	1	.	.	.		1
WORTHINGTON	.	14	.	.	4		18
TOTAL	37	4083	309	347	686		5462

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SERO TYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
AARHUS	.	1	.	2	3	1	.	.	.	2	9
ABAE TETUBA	1	2	.	.	1	.	1	.	.	2	7
ABERDEEN	.	1	.	.	.	1	.	1	1	1	4
ABONY	1	.	.	.	2	.	.	2	1	1	6
ADELAIDE	3	21	10	1	10	2	4	1	20	72	
AFRICANA	.	.	.	.	2	.	.	.	.	2	
AGAMA	.	1	.	.	1	.	.	.	.	2	
AGO	.	1	.	.	.	.	.	.	.	1	
AGONA	41	173	317	136	57	22	64	17	164	991	
AGUEVE	.	.	2	.	.	1	.	.	3	6	
AJI OBO	.	.	1	.	1	.	.	.	.	2	
ALABAMA	.	.	.	.	1	1	.	.	.	2	
ALACHUA	1	3	1	2	2	1	1	.	3	14	
ALAMO	.	.	.	.	.	1	.	.	.	1	
ALBANY	.	2	8	1	1	1	.	.	10	23	
ALLANDALE	.	.	.	.	.	1	.	.	.	1	
AMAGER	.	1	.	.	.	.	.	.	2	3	
AMSTERDAM	.	1	1	.	.	.	1	.	2	5	
ANATUM	4	18	19	8	19	5	22	10	33	138	
ANECHO	.	.	.	1	1	.	.	.	.	2	

(Continued)

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
ANTSALOVA	.	1	1	.	.	.	.	.	.	.	2
ARAGUA	.	.	.	.	1	.	.	.	.	.	1
ARECHAVALETA	1	.	.	1	.	.	1	.	.	1	4
ARKANSAS	.	.	.	.	.	.	2	.	.	.	2
ATHINAI	.	.	.	.	.	.	1	.	.	.	1
BAILDON	.	.	3	.	8	46	.	1	15	73	
BANANA	1	.	.	.	.	.	.	.	.	1	
BANCO	.	2	.	.	.	.	.	.	.	2	
BARDO	.	2	1	3	.	.	.	.	3	9	
BAREILLY	4	5	32	13	33	19	35	2	10	153	
BENFICA	.	.	.	.	1	.	.	.	.	1	
BERE	.	1	.	.	.	.	.	.	.	1	
BERKELEY	.	.	1	.	.	.	.	.	.	1	
BERTA	6	24	19	2	47	1	2	1	21	123	
BINZA	.	1	.	.	.	.	.	.	.	1	
BIRKENHEAD	.	.	.	.	.	.	.	2	2	4	
BLEDGAM	.	1	.	1	.	.	.	1	.	3	
BLOCKLEY	.	9	11	5	4	.	11	14	7	61	
BOCHUM	.	.	.	.	5	.	.	.	.	5	
BONARIENSIS	.	4	1	.	1	.	.	.	.	6	

(Continued)

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
BONN	.	.	1	.	.	.	.	.	.	.	1
BOVISMORBIFICANS	2	14	18	6	4	3	2	3	12		64
BRADFORD	.	.	.	1	.	.	.	.	.	.	1
BRAENDERUP	59	58	57	53	83	32	60	16	79		497
BRANCASTER	.	1	.	.	.	.	.	.	.	.	1
BRANDENBURG	10	25	19	14	36	7	3	2	16		132
BRENENEY	.	5	6	5	3	75	8	1	9		112
BRONX	.	2	.	.	.	.	.	.	.	.	2
BROOKLYN	.	.	.	.	.	.	.	1	.		1
BUZU	.	1	.	.	3	.	.	.	.		4
CALABAR	.	.	1	.	.	.	.	.	.		1
CALIFORNIA	.	.	.	.	.	.	.	3	.		3
CAMBERWELL	1	.	.	.	.	.	.	.	.		1
CANNSTATT	.	.	1	.	.	.	.	.	.		1
CARRAU	.	.	.	.	3	.	.	.	.		3
CERRO	4	4	2	3	6	1	5	12	15		52
CHAILEY	.	1	3	.	1	.	.	.	4		9
CHAMELEON	.	1	3	2	1	.	.	.	1		8
CHESTER	1	4	5	1	5	.	4	2	2		24
CHICAGO	.	.	.	.	.	.	.	.	1		1

(Continued)



TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
CHINCOL	.	.	.	.	1	.	.	.	.	.	1
CHOLERAESUIS	2	4	5	2	5	.	.	.	.	5	23
CHOLERAESUIS VAR KUN	2	2	1	4	.	1	1	1	1	1	13
CLAIBORNEI	.	.	.	.	.	.	.	.	.	1	1
COELN	.	.	1	.	.	.	.	.	4	.	5
COLINDALE	1	1	1	.	1	.	.	.	.	.	4
COLORADO	.	.	.	.	2	.	.	.	.	.	2
CONCORD	.	.	.	.	2	.	.	.	.	.	2
CORVALLIS	1	.	.	.	.	.	.	.	.	.	1
CUBANA	1	4	7	1	20	3	4	7	25	25	72
DAYTONA	.	.	.	.	.	2	.	.	1	.	3
DECATUR	.	.	1	.	1	.	.	.	.	.	2
DENVER	.	.	.	.	1	.	.	.	.	.	1
DERBY	7	12	24	12	32	12	4	25	43	43	171
DIGUEL	.	1	.	.	.	.	.	.	.	.	1
DJUGU	.	1	.	.	.	.	.	.	.	.	1
DOULASSAME	.	.	.	.	.	1	.	.	.	.	1
DRYPOOL	.	.	.	1	.	.	.	3	.	.	4
DUBLIN	.	4	2	2	2	.	.	23	45	45	78
DUESSELDORF	2	3	.	4	1	.	4	1	.	.	15

(Continued)

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
DURBAN	.	1	1	1	2	.	.	.	5	10	
DUVAL	.	.	.	.	1	.	.	.	.	1	
EALING	.	2	2	.	2	.	.	.	.	6	
EASTBOURNE	.	2	1	.	2	3	.	.	.	8	
EDINBURG	.	1	.	.	.	.	.	.	.	1	
EMEK	4	.	1	1	.	.	.	.	1	7	
ENTERITIDIS	460	1670	1051	213	688	93	157	557	1140	6029	
ESSEN	.	2	.	.	.	.	.	.	.	2	
FARMSEN	2	.	1	.	1	.	.	.	.	4	
FISCHERKIETZ	.	.	.	.	1	.	.	.	.	1	
FLINT	.	.	2	.	52	.	.	1	.	55	
FLORIDA	.	3	.	.	5	.	.	.	.	8	
FLUNTERN	.	.	.	.	3	.	.	.	.	3	
FYRIS	.	.	.	.	1	.	.	.	.	1	
GABON	.	.	.	1	.	.	.	.	.	1	
GALLINARUM	.	.	.	.	.	.	1	.	.	1	
GAMABA	.	.	.	.	.	1	.	.	.	1	
GAMINARA	1	2	4	.	14	4	30	1	5	61	
GATOW	.	.	.	.	2	.	.	.	.	2	
GATUNI	1	.	.	.	.	.	.	.	.	1	

(Continued)

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
GEORGIA	.	.	.	.	2	.	.	.	.	.	2
GIVE	5	10	11	5	9	6	31	1	14		92
GLOSTRUP	5	.	.	1	2	.	1	.	1		10
GOETTINGEN	.	.	1	.	.	.	.	.	.	.	1
GOLDCOAST	1	.	.	.	.	.	.	.	.	.	1
GROUP 51	.	1	1	.	.	.	.	.	.	.	2
GROUP 53	.	.	.	2	.	.	.	.	.	.	2
GROUP 57	.	.	.	1	.	.	.	.	.	.	1
GROUP 58	.	.	1	.	.	.	.	1	.	.	2
GROUP 60	.	1	.	.	1	.	.	.	.	.	2
GROUP 61	.	.	2	.	1	.	.	1	1		5
GROUP A	.	.	.	.	.	.	.	2	.	.	2
GROUP B	15	75	82	106	68	42	47	68	29		532
GROUP C1	2	13	10	3	12	11	22	10	2		85
GROUP C2	5	8	3	2	20	1	2	9	1		51
GROUP D1	3	5	6	7	38	12	9	33	.		113
GROUP D2	.	1	.	.	.	.	.	.	.	.	1
GROUP D3	.	2	.	.	.	.	.	.	.	.	2
GROUP E1	.	2	.	1	5	.	4	1	1		14
GROUP E2	.	.	.	.	.	.	2	.	.		2

(Continued)

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION											TOTAL	
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific				
GROUP E4	2	.	.	1	.	.	.	.	.	.	.	.	3
GROUP F	1	.	.	.	1	3	1	.	.	.	.	.	6
GROUP G	.	.	.	1	2	5	7	1	1	.	.	.	17
GROUP H	.	1	1	.	.	.	.	.	.	.	.	.	2
GROUP I	1	3	1	1	3	.	.	.	.	.	.	35	44
GROUP K	.	.	1	1	1	1	.	.	.	.	.	.	4
GROUP L	.	.	.	.	1	.	.	.	.	.	.	.	1
GROUP N	.	.	1	.	.	.	.	.	.	.	.	.	1
GROUP O	.	1	.	.	.	.	.	.	.	.	.	.	1
GROUP P	.	.	.	.	1	.	.	.	.	.	.	.	1
GROUP Q	.	.	.	.	1	.	.	.	.	.	.	.	1
GROUP R	.	.	.	.	1	2	.	.	.	.	.	.	3
GROUP S	.	.	.	.	.	.	.	1	.	.	.	.	1
GROUP V	.	1	4	.	3	.	.	.	.	.	.	.	9
GROUP W	.	.	.	.	2	.	.	.	.	.	.	.	3
GROUP X	.	.	1	.	1	.	.	.	.	.	.	.	2
GROUP Y	.	.	.	.	1	3	.	.	.	.	.	.	4
GROUP Z	.	4	1	.	.	.	.	.	.	.	.	.	6
GRUMPENSIS	.	.	.	.	1	.	.	.	.	.	.	.	1
HAARDT	.	.	.	.	.	.	.	.	.	.	.	2	2

(Continued)

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
HADAR	33	152	67	45	84	12	24	36	91	544	
HAIFA	.	.	.	1	1	.	.	.	1	3	
HARLEYSTREET	.	.	.	1	.	.	.	.	.	1	
HARTFORD	28	21	46	9	40	10	8	6	7	175	
HAVANA	6	4	6	1	21	.	2	10	27	77	
HAYINDOGO	1	.	.	.	.	.	.	.	.	1	
HEIDELBERG	139	475	293	156	281	81	79	77	319	1900	
HEILBRON	.	.	.	.	.	.	.	.	1	1	
HIDUDDIFY	.	.	.	.	3	.	.	.	.	3	
HINDMARSH	.	.	.	.	.	1	.	2	.	3	
HOMOSASSA	.	.	.	.	2	.	.	.	.	2	
HOUTEN	.	.	3	.	2	.	.	.	1	6	
HVITTINGFOSS	2	2	3	1	5	.	7	1	7	28	
I 4,5,12:I:-	.	24	.	.	10	.	.	.	.	34	
IBADAN	6	.	1	.	17	1	14	.	.	39	
IDIKAN	.	.	1	.	.	.	.	.	.	1	
II 50:B:Z6	.	.	.	1	1	.	.	1	.	3	
IIIB 61:1,V:1,5,7	.	.	.	.	1	.	.	.	.	1	
INDIANA	.	.	.	.	2	.	1	.	4	7	
INFANTIS	31	64	93	26	72	10	141	33	130	600	

(Continued)

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION											TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific			
INVERNESS	.	2	.	1	18	1	6	.	4			32
IRUMU	1	2	1	.	3	.	.	2	6			15
ISANGI	.	2	2	.	.	.	.	.	1			5
ISTANBUL	.	2	.	.	.	.	.	.	5			7
ITAMI	.	.	.	.	.	8	.	.	.			8
ITURI	.	.	.	.	3	.	1	.	1			5
IV 44:Z4,Z23:-	2	2	1	.	1	.	.	.	.			6
IV 45:G,Z51:-	.	.	.	.	.	1	.	1	.			2
JAMAICA	.	.	.	.	1	.	.	.	.			1
JANGWANI	.	1	1	.	1	.	.	.	2			5
JAVA	6	34	104	28	44	14	4	6	8			248
JAVIANA	25	58	68	37	522	68	279	70	40			1167
JODHPUR	.	.	.	.	1	.	.	.	.			1
JOHANNESBURG	.	3	5	2	10	7	1	.	4			32
KAMBOLE	.	.	1	.	.	.	.	.	.			1
KEDUGOU	.	1	.	.	.	.	.	.	.			1
KENTUCKY	5	24	7	3	1	.	4	2	12			58
KIAMBU	.	.	2	1	4	.	3	.	3			13
KILWA	.	.	.	.	1	.	.	.	.			1
KINGSTON	.	1	.	.	.	.	.	.	.			1

(Continued)

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
KINONDONI	.	.	1	.	.	.	.	.	.	.	1
KINSHASA	.	.	.	.	.	.	.	1	.	.	1
KINTAMBO	.	.	1	4	4	3	2	3	3	.	20
KISARAWA	.	1	.	.	1	.	.	.	.	.	2
KOKOLI	.	.	.	.	1	.	.	.	.	.	1
KOKOMLEMLE	.	.	.	.	1	.	.	.	.	.	1
KOTTBUS	.	.	.	.	1	.	.	1	.	.	2
KRALENDYK	1	1	4	2	.	.	.	4	2	.	14
KUA	.	1	.	.	.	.	.	.	.	.	1
KUNDUCHI	.	.	.	.	.	1	.	.	.	.	1
LABADI	.	.	.	.	.	.	.	.	1	.	1
LAMBERHURST	.	1	.	.	.	.	.	.	.	.	1
LAMIN	.	.	.	.	1	.	.	.	.	.	1
LANDWASSER	.	1	.	.	.	.	.	.	.	.	1
LANGENSALZA	.	.	.	.	.	.	1	.	.	.	1
LANKA	.	.	.	1	.	.	.	.	.	.	1
LAROCHELLE	.	.	.	.	.	1	5	.	.	.	6
LIMETE	.	1	.	.	.	.	.	.	.	.	1
LINDENBURG	1	.	.	1	2	1	5	.	.	.	10
LITCHFIELD	7	26	17	10	19	8	11	6	15	.	119

(Continued)

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
LIVINGSTONE	1	1	1	.	.	.	.	1	1	5	
LOCKLEAZE	.	.	.	.	1	.	.	.	.	1	
LIMALINDA	.	1	.	4	3	.	.	3	5	16	
LOMITA	.	.	.	.	.	.	.	3	.	3	
LONDON	4	3	6	.	3	.	4	1	7	28	
LOVELACE	.	.	.	.	1	.	.	.	.	1	
LUCIANA	.	.	1	.	.	1	.	.	.	3	
MADELIA	.	.	1	.	6	.	4	.	1	12	
MAGWA	.	.	1	.	.	.	.	.	.	1	
MANHATTAN	1	14	26	6	10	1	5	2	8	73	
MARINA	2	6	12	5	9	4	2	.	7	47	
MARYLAND	.	.	.	.	.	.	1	.	.	1	
MATADI	.	.	2	.	.	.	.	.	2	4	
MATOPENI	.	1	.	.	1	.	.	.	.	2	
MBANDAKA	9	27	19	17	17	9	17	9	23	147	
MELEAGRIDIS	1	2	4	2	2	.	4	5	19	39	
MENDOZA	.	.	.	.	1	.	2	.	.	3	
MIAMI	19	12	7	3	49	3	1	1	4	99	
MICHIGAN	.	.	.	.	.	.	.	.	2	2	
MINNESOTA	1	.	.	1	1	1	4	1	8	17	

(Continued)



TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
MISSISSIPPI	5	12	1	2	136	54	101	.	3	314	
MOLADE	.	.	.	.	.	.	.	.	1	1	
MONO	.	.	.	1	.	.	1	.	.	2	
MONSCHAUI	.	.	1	.	.	.	.	.	2	3	
MONTEVIDEO	43	89	115	55	111	37	116	83	179	828	
MOSCOW	.	4	.	.	.	.	.	.	.	4	
MOUNTPLEASANT	.	.	.	.	1	.	.	.	.	1	
MUENCHEN	61	48	57	47	189	46	80	43	68	639	
MUENSTER	8	20	10	9	6	1	5	2	7	68	
NCHANGA	.	.	1	.	.	.	.	.	.	1	
NEUBRUNSWICK	3	1	.	.	1	.	6	4	21	36	
NEWHAW	.	1	.	.	.	.	.	.	.	1	
NEWINGTON	.	.	2	.	1	.	8	11	3	25	
NEWPORT	75	135	156	165	768	143	564	102	164	2272	
NEWROCHELLE	.	.	.	.	1	.	.	.	.	1	
NIMA	.	.	.	1	1	.	.	.	3	5	
NORWICH	.	5	5	11	7	24	11	3	1	67	
NOTTINGHAM	2	.	.	.	.	.	.	.	.	2	
OHIO	7	19	10	4	11	2	1	10	15	79	
OLDENBURG	.	.	1	.	.	.	.	.	.	1	

(Continued)

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
ORANIENBURG	34	66	153	47	61	14	106	79	133	693	
ORIENTALIS	.	.	.	.	.	.	.	.	1	1	
ORION	.	.	.	.	.	.	.	.	1	1	
OSLO	.	1	2	2	7	1	2	1	15	31	
OTHMARSCHEN	.	.	.	.	4	.	.	3	.	7	
ODWIJK	.	1	.	.	.	.	.	.	.	1	
OVERSCHIE	.	3	.	.	.	.	.	.	.	3	
PANAMA	11	17	11	5	8	8	10	19	30	119	
PARATYPHI A	8	22	15	4	5	.	6	2	23	85	
PARATYPHI B	18	9	23	9	13	.	27	26	64	189	
PARERA	.	1	.	.	.	.	.	.	3	4	
PENSACOLA	.	.	.	.	3	1	.	.	1	5	
PHOENIX	.	.	.	.	.	.	4	.	.	4	
POMONA	.	5	.	.	3	.	1	1	9	19	
POONA	21	46	52	45	42	8	44	37	51	346	
PORTSMOUTH	2	.	.	.	.	.	.	.	.	2	
POTSDAM	.	.	.	1	2	1	1	.	1	6	
PUTTEN	3	1	1	1	1	.	.	.	2	9	
QUEBEC	.	1	.	.	.	.	.	.	.	1	
QUINIELA	.	.	.	.	.	.	1	.	.	1	

(Continued)

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
RAUS	.	.	2	.	.	.	1	.	.	.	3
READING	7	12	19	12	6	3	3	5	14		81
REMO	1	.	.	.	.	.	.	.	.	.	1
RICHMOND	.	3	.	.	.	.	1	.	.	.	4
RISSEN	1	.	.	.	2	.	1	.	2		6
ROMANBY	.	1	.	.	.	.	.	.	.	.	1
RODEPOORT	.	.	.	2	.	.	.	.	.	.	2
ROTERBERG	.	.	1	.	.	.	.	.	.	.	1
RUBISLAW	.	7	4	.	45	6	23	.	3		88
SAARBRUECKEN	.	1	.	.	.	.	.	.	.	.	1
SABOYA	.	1	.	.	.	.	.	.	.	.	1
SAINTPAUL	57	76	55	26	77	17	25	37	109		479
SAKARAH	1	.	.	.	.	.	.	.	.	.	1
SANDIEGO	10	3	7	1	9	1	6	5	13		55
SAPHRA	.	.	.	.	1	.	14	.	1		16
SARA-JANE	.	.	.	1	.	.	.	.	.	.	1
SCHLEISSHEIM	.	1	.	.	2	5	.	.	.	.	8
SCHWARZENGRUND	10	19	22	4	40	8	3	5	12		123
SCULCOATES	.	.	.	.	.	1	.	.	.	.	1
SENDAI	.	.	1	.	1	.	.	.	.	.	2

(Continued)

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
SENFTEMBERG	10	38	12	6	4	2	7	9	54	142	
SERREKUNDA	.	1	.	.	.	.	.	.	.	1	
SHUBRA	1	.	1	.	1	.	1	.	.	4	
SINGAPORE	.	3	1	.	2	.	3	.	3	12	
SINSTORF	.	1	.	.	.	.	.	.	.	1	
SKANSEN	.	1	.	.	.	.	.	.	.	1	
SOFIA	.	.	.	.	.	.	.	.	1	1	
SOMONE	.	1	.	.	.	.	.	.	.	1	
STANLEY	14	28	32	16	24	3	12	13	51	193	
STANLEYVILLE	.	13	1	.	2	.	.	.	.	16	
STELLINGEN	.	.	.	1	.	.	.	.	.	1	
SUBERU	.	.	.	.	1	.	.	.	.	1	
SUBSPECIES I	3	22	2	3	36	1	1	1	3	72	
SUBSPECIES II	.	1	2	1	.	1	.	.	.	5	
SUBSPECIES III	.	.	.	.	.	.	.	1	.	1	
SUBSPECIES IIIA	.	1	1	6	4	.	.	.	.	12	
SUBSPECIES IIIA/IIIB	.	.	.	3	5	.	1	3	.	12	
SUBSPECIES IIIB	.	.	1	1	.	1	1	1	2	7	
SUBSPECIES IV	1	2	2	3	7	1	1	.	.	17	
SUNDSVALL	1	2	.	1	1	.	.	.	2	7	

(Continued)

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
TAKORADI	2	.	.	.	2	.	.	.	.	.	4
TALLAHASSEE	1	.	.	.	3	1	.	3	.	.	8
TAMBACOUNDA	.	.	.	1	.	.	.	.	.	.	1
TEKO	.	.	.	.	1	.	.	.	.	.	1
TELAVIV	.	.	.	.	1	.	.	.	.	.	1
TELELKEBIR	2	2	2	3	4	2	.	.	11	.	26
TENNESSEE	1	3	6	2	31	1	1	7	11	.	63
THOMASVILLE	.	1	.	.	.	.	1	.	.	.	2
THOMPSON	36	85	88	53	81	15	58	39	116	.	571
TIENBA	.	.	.	.	1	.	.	.	.	.	1
TUINDORP	.	.	.	.	.	.	.	.	1	.	1
TYPHI	25	101	43	10	38	9	24	10	122	.	382
TYPHIMURIUM	607	1331	1227	704	1629	416	562	542	1082	.	8100
TYPHIMURIUM VAR COPE	148	175	49	26	7	19	.	34	260	.	718
UCCLE	.	.	.	.	.	1	.	2	1	.	4
UGANDA	2	5	9	2	7	1	6	1	11	.	44
UNKNOWN	16	57	52	24	70	46	131	9	110	.	515
UPPSALA	.	.	.	.	1	.	.	.	.	.	1
URBANA	5	15	12	1	5	1	2	3	2	.	46
UZARAMIO	.	2	.	.	.	.	.	.	1	.	3

(Continued)

TABLE 5  
SALMONELLA ISOLATIONS FROM HUMAN SOURCES  
BY SEROTYPE AND GEOGRAPHIC REGIONS, 1998

SEROTYPE	REGION										TOTAL
	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific		
VEJLE	.	.	.	.	.	.	.	1	.	.	1
VICTORIA	.	.	.	.	.	.	.	1	.	.	1
VIRCHOW	5	12	10	3	6	3	7	1	17		64
WANGATA	1	.	.	.	.	.	.	.	.	.	1
WASSENAAR	1	1	3	.	.	.	.	.	1		6
WAYCROSS	.	1	.	.	1	.	.	.	.	.	2
WELIKADE	.	.	.	1	.	.	.	.	.	.	1
WELTEVREDEN	4	6	7	3	4	.	1	5	37		67
WERNIGERODE	.	.	.	.	3	.	.	.	.	.	3
WESLACO	.	.	.	.	.	.	1	1	.	.	2
WESTHAMPTON	.	1	.	.	.	1	.	.	1		3
WORTHINGTON	3	6	2	2	1	1	2	3	18		38
YORUBA	.	1	.	.	.	.	.	.	.	.	1
ZANZIBAR	.	1	.	.	.	.	.	.	.	.	1
TOTAL	2273	5758	4876	2335	6199	1581	3192	2295	5462		33971

TABLE 6  
 CLINICAL SALMONELLA ISOLATIONS FROM NONHUMAN SOURCES  
 REPORTED TO CDC AND USDA BY SEROTYPE AND SOURCE, 1998

SEROTYPE	NONHUMAN SOURCE											TOTAL		
	CHICKEN INCLUDING EGGS	TURKEY	PORCINE	BOVINE	EQUINE	OTHER DOMESTIC ANIMAL / ENVIRONMENT	FEED AND FEED SUPPLY	OTHER BIRD/WILD ANIMAL	REPTILE / ENVIRONMENT	ALL OTHER				
ABAETETUBA	.	.	.	.	.	.	.	.	.	.	.	.	3	3
ABERDEEN	.	.	.	.	.	.	.	.	.	.	.	.	2	2
ABONY	.	.	2	.	.	.	.	.	.	.	.	.	.	2
ADELAIDE	.	4	.	.	.	.	.	.	.	.	1	.	55	60
AGAMA	.	2	.	.	.	.	.	.	.	.	.	.	.	2
AGONA	121	107	82	43	.	2	.	.	.	.	.	270	625	
ALACHUA	14	2	5	1	.	.	.	.	.	.	.	11	33	
ALBANY	2	2	.	3	.	.	.	1	.	.	.	14	22	
ALLANDALE	.	.	.	.	.	.	.	.	.	.	.	15	15	
AMAGER	3	1	.	.	.	.	.	.	.	5	6	2	17	
AMSTERDAM	3	.	.	.	.	.	.	.	.	.	.	1	4	
ANATUM	35	11	103	69	.	4	1	1	1	425	1	649		
APAPA	.	.	.	.	.	.	.	.	.	.	.	2	2	
AQUA	.	.	.	.	.	.	.	.	2	.	.	.	2	
ARECHAVALETA	.	.	.	.	.	.	.	.	.	.	.	1	1	
ARKANSAS	2	2	.	.	.	.	.	1	.	.	.	1	6	
BABELSBERG	2	.	.	.	.	.	.	.	.	.	.	.	2	
BANANA	.	1	.	.	.	.	.	.	.	.	.	.	1	
BARDO	.	7	.	2	.	.	.	.	.	.	.	4	13	
BAREILLY	2	.	1	5	.	.	.	1	.	.	2	8	19	
BATONROUGE	.	.	.	.	.	.	.	.	.	.	.	1	1	

(Continued)

TABLE 6  
CLINICAL SALMONELLA ISOLATIONS FROM NONHUMAN SOURCES  
REPORTED TO CDC AND USDA BY SEROTYPE AND SOURCE, 1998

SEROTYPE	NONHUMAN SOURCE										TOTAL	
	CHICKEN INCLUDING EGGS	TURKEY	PORCINE	BOVINE	EQUINE	OTHER DOMESTIC ANIMAL / ENVIRONMENT	FEED AND FEED SUPPLY	OTHER BIRD/WILD ANIMAL	REPTILE / ENVIRONMENT	ALL OTHER		
BERE	•	•	•	•	•	•	•	•	•	•	•	1
BERGEN	•	•	•	1	•	•	•	•	•	•	•	1
BERTA	25	8	4	1	•	•	•	•	•	15	•	53
BIETRI	3	15	•	•	•	•	•	•	•	1	•	19
BINZA	7	5	•	2	•	•	1	•	•	6	•	21
BLEADON	•	•	•	•	•	•	•	•	1	•	•	1
BLOCKLEY	•	•	•	•	•	•	•	•	•	7	•	7
BOVISMORBIFICANS	1	•	4	10	•	•	•	•	•	23	•	38
BRAENDERUP	111	3	6	8	•	•	•	•	3	70	•	201
BRANDENBURG	64	23	24	5	•	•	•	•	•	67	•	183
BREDENEY	9	247	8	4	•	•	•	•	1	80	•	349
BUZU	•	•	•	•	•	•	•	•	•	1	•	1
CALIFORNIA	•	•	•	•	•	•	•	•	•	1	•	1
CAMBRIDGE	•	•	•	1	•	•	•	•	•	•	•	1
CARRAU	•	•	•	•	•	•	•	•	1	•	•	1
CERRO	41	8	7	161	•	1	2	3	•	55	•	278
CHAILEY	•	•	•	1	•	•	•	•	•	6	•	7
CHAMELEON	•	•	•	•	•	•	•	•	•	7	•	7
CHESTER	•	2	•	•	•	•	•	•	•	10	•	12
CHOLERAESUIS	•	•	64	•	•	•	•	•	•	1	•	65
CHOLERAESUIS VAR KUN	•	•	309	3	•	•	•	•	•	30	•	342

(Continued)



TABLE 6  
 CLINICAL SALMONELLA ISOLATIONS FROM NONHUMAN SOURCES  
 REPORTED TO CDC AND USDA BY SEROTYPE AND SOURCE, 1998

SEROTYPE	NONHUMAN SOURCE											TOTAL
	CHICKEN INCLUDING EGGS	TURKEY	PORCINE	BOVINE	EQUINE	OTHER DOMESTIC ANIMAL / ENVIRONMENT	FEED AND FEED SUPPLY	OTHER BIRD/WILD ANIMAL	REPTILE / ENVIRONMENT	ALL OTHER		
CUBANA	4	17	5	10	.	1	.	.	1	12	50	
DERBY	7	6	529	9	.	.	.	1	.	509	1061	
DRYPOOL	.	.	.	1	.	.	2	.	.	1	4	
DUBLIN	.	.	.	101	.	.	.	.	.	12	113	
EALING	.	.	.	.	.	.	.	.	.	1	1	
EASTBOURNE	.	.	.	.	.	.	.	1	.	.	1	
EMEK	2	.	.	.	.	.	.	.	.	.	2	
ENTERITIDIS	529	7	18	21	.	12	.	14	.	249	850	
FLINT	.	.	.	.	.	.	.	.	.	1	1	
FLORIDA	.	.	.	.	.	.	.	.	1	1	2	
FLUNTERN	.	.	.	.	.	.	.	.	3	.	3	
FRESNO	.	.	.	.	.	.	.	.	.	1	1	
GAMINARA	.	1	.	.	.	.	3	.	.	4	8	
GEGE	.	.	2	.	.	.	.	.	.	.	2	
GERA	1	2	.	.	.	.	.	.	.	.	3	
GIVE	28	4	1	22	.	.	.	.	.	67	122	
GROUP C1	.	.	.	.	.	.	.	1	.	.	1	
GROUP E3	.	.	.	.	.	.	1	.	.	.	1	
HAARDT	2	.	.	.	.	.	.	.	.	7	9	
HADAR	81	218	3	5	.	1	.	.	.	325	633	
HAGENBECK	.	.	.	.	.	.	.	.	.	1	1	

(Continued)

TABLE 6  
CLINICAL SALMONELLA ISOLATIONS FROM NONHUMAN SOURCES  
REPORTED TO CDC AND USDA BY SEROTYPE AND SOURCE, 1998

SEROTYPE	NONHUMAN SOURCE											TOTAL	
	CHICKEN INCLUDING EGGS	TURKEY	PORCINE	BOVINE	EQUINE	OTHER DOMESTIC ANIMAL / ENVIRONMENT	FEED AND FEED SUPPLY	OTHER BIRD/WILD ANIMAL	REPTILE / ENVIRONMENT	ALL OTHER			
HARTFORD	•	•	1	1	•	•	•	•	•	•	•	25	27
HATO	•	•	•	•	•	•	•	•	•	•	•	•	3
HAVANA	7	9	9	5	•	•	•	•	•	•	•	19	49
HEIDELBERG	1212	188	166	29	•	1	•	•	•	•	•	686	2282
HENNEPIN	•	•	•	•	•	•	•	•	•	•	•	•	1
HINDMARSH	•	•	•	•	•	•	•	•	•	•	•	•	1
HOLCOMB	•	1	•	1	•	•	•	•	•	•	•	•	3
HOUTEN	•	•	•	•	•	•	•	•	•	•	•	•	2
HVITTINGFOSS	•	•	•	•	•	•	•	•	•	•	•	•	1
IBADAN	•	•	•	•	•	•	•	•	•	•	•	•	2
IDIKAN	•	•	•	•	•	•	•	•	•	•	•	•	1
ILLINOIS	5	•	•	•	•	•	•	•	•	•	•	•	5
INDIANA	•	1	•	•	•	•	•	•	•	•	•	•	13
INFANTIS	125	18	81	25	•	1	1	1	•	•	•	217	469
INVERNESS	2	•	•	•	•	•	•	•	•	•	•	•	23
IRUMU	•	•	1	•	•	•	•	•	•	•	•	•	1
ISTANBUL	17	6	•	•	•	•	•	•	•	•	•	•	37
JAVA	1	1	1	2	•	•	•	•	•	•	•	•	22
JAVIANA	2	27	•	1	•	•	•	•	•	•	•	•	86
JOHANNESBURG	12	15	23	1	•	•	•	•	•	•	•	•	252
KENTUCKY	509	26	7	225	•	•	•	•	•	•	•	•	1265

(Continued)

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KIAMBU	4	4	.	1	.	.	.	.	.	10	19	
KINSHASA	.	.	.	1	.	.	.	.	.	5	6	
KODJOVI	.	.	.	1	.	.	.	.	3	.	4	
KOKOMLEMLE	.	.	.	.	.	.	.	.	1	.	1	
KRALENDYK	.	.	.	.	.	.	.	.	.	1	1	
KRALINGEN	.	.	.	.	.	.	.	.	.	1	1	
KREFELD	.	.	4	1	.	.	.	.	.	6	11	
LEXINGTON	2	.	.	.	.	.	.	.	.	2	4	
LILLE	28	1	.	10	.	.	.	.	.	6	45	
LITCHFIELD	7	2	4	2	.	.	.	.	1	26	42	
LIVINGSTONE	54	5	1	1	.	1	1	.	.	52	115	
LOHBRUEGGE	.	.	.	.	.	.	.	.	1	2	3	
LOMALINDA	.	.	.	.	.	.	.	.	.	1	1	
LOME	.	.	.	.	.	.	.	.	1	.	1	
LOMITA	1	.	.	.	.	.	.	.	.	.	1	
LONDON	1	2	23	7	.	.	.	.	.	63	96	
LOSANGELES	.	.	.	.	.	.	.	.	.	1	1	
MANHATTAN	.	.	.	2	.	.	.	.	.	40	42	
MANILA	.	.	.	.	.	.	.	.	.	1	1	
MARINA	.	.	.	.	.	.	.	.	2	8	10	
MATADI	.	.	.	.	.	.	.	.	.	1	1	

(Continued)

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MBANDAKA	169	14	32	67	.	1	8	.	.	88	379	
MELEAGRIDIS	1	1	.	36	.	.	.	.	.	87	125	
MENHADEN	.	.	.	3	.	.	.	.	.	3	6	
MIAMI	1	.	.	.	.	.	.	.	.	1	2	
MINNEAPOLIS	.	.	.	1	.	.	.	.	.	.	1	
MINNESOTA	.	1	.	1	.	.	.	.	.	27	29	
MISSISSIPPI	.	.	.	.	.	.	.	.	.	5	5	
MOLADE	9	3	.	.	.	.	1	.	.	3	16	
MONTEVIDEO	117	47	37	101	.	1	5	3	2	346	659	
MOUNTPLEASANT	.	.	.	.	.	.	.	.	1	.	1	
MUENCHEN	1	6	38	11	.	2	.	.	4	136	198	
MUENSTER	52	68	22	57	.	.	1	.	2	179	381	
NEWBRUNSWICK	2	.	6	19	.	1	.	.	.	56	84	
NEWHAW	.	1	3	1	.	.	.	.	.	.	5	
NEWINGTON	.	1	.	14	.	.	.	.	.	9	24	
NEWPORT	7	100	8	43	.	5	1	1	6	126	297	
NORWICH	1	.	.	1	.	.	.	.	.	1	3	
OHIO	36	32	8	2	.	.	.	.	.	71	149	
ONDERSTEPOORT	.	.	.	.	.	.	.	.	.	1	1	
ORANIENBURG	20	13	4	11	.	2	2	2	7	51	112	
ORION	4	1	19	.	.	.	.	.	.	4	28	

(Continued)

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OSLO	•	•	•	•	•	1	•	•	4	•	2	7
OJAKAM	2	•	•	•	•	•	•	•	•	•	1	3
PANAMA	1	5	•	1	•	1	•	•	•	6	9	23
PARERA	•	•	•	•	•	•	•	•	•	•	5	5
PHOENIX	•	•	•	•	•	•	•	•	•	1	•	1
POANO	•	•	•	•	•	•	•	•	•	1	•	1
POMONA	1	•	•	1	•	•	•	4	•	1	7	14
POONA	•	3	•	1	•	•	•	•	•	1	10	15
PULLORUM	5	•	•	•	•	•	•	•	•	•	5	10
PUTTEN	1	1	3	•	•	•	•	•	•	•	3	8
QUIMBAMBA	•	•	•	•	•	•	•	•	•	2	1	3
READING	1	63	5	5	•	1	•	•	•	•	184	259
REDLANDS	•	•	•	•	•	•	•	•	•	1	•	1
RUBISLAW	•	•	•	•	•	1	•	1	•	•	45	47
RUIRU	•	3	•	•	•	•	•	•	•	•	•	3
SACHSENWALD	•	•	•	•	•	•	•	•	•	1	1	2
SAINTPAUL	2	106	47	2	•	•	•	•	•	•	132	289
SALINATIS	•	•	•	•	•	•	•	•	•	•	2	2
SANDIEGO	•	2	•	•	•	•	•	•	•	•	1	3
SANJUAN	•	•	•	•	•	•	•	•	•	•	3	3
SCHWARZENGRUND	70	64	51	1	•	•	1	•	•	228	416	

(Continued)

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SENFTENBERG	389	360	22	11	.	2	6	2	1	215	1008	
SOERENGA	.	.	.	.	.	.	1	.	.	.	1	
STANLEY	.	.	.	.	.	.	.	.	1	.	1	
STANLEYVILLE	.	.	.	.	.	.	.	.	.	1	1	
SUBSPECIES IIIA/IIIB	.	.	.	.	.	.	.	.	.	2	2	
SUBSPECIES IV	.	.	.	.	.	.	.	1	1	.	2	
TAKSONY	7	.	.	1	.	.	.	.	.	3	11	
TALLAHASSEE	.	.	.	.	.	.	.	.	.	1	1	
TELELKEBIR	.	.	.	.	.	.	.	.	.	1	1	
TELHASHOMER	.	.	.	.	.	.	.	.	1	.	1	
TENNESSEE	12	13	3	4	.	.	1	.	.	8	41	
THOMASVILLE	2	3	.	1	.	.	.	.	.	4	10	
THOMPSON	116	.	2	13	.	1	.	.	1	117	250	
TRANOROA	.	.	.	.	.	.	.	.	.	1	1	
TUCSON	.	.	.	.	.	.	.	.	.	1	1	
TUINDORP	.	.	.	.	.	.	.	.	.	2	2	
TULEAR	.	.	.	1	.	.	.	.	.	.	1	
TYPHI	.	.	3	.	.	.	.	.	.	3	6	
TYPHIMURIUM	135	128	492	526	6	29	2	6	.	630	1954	
TYPHIMURIUM VAR COPE	128	96	897	860	1	20	.	14	1	866	2883	
TYPHISUIS	.	.	3	.	.	.	.	.	.	1	4	

(Continued)

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UGANDA	2	26	7	14	.	1	1	.	2	46	99	
URBANA	.	23	.	.	.	.	.	.	.	12	35	
UZARAMO	.	.	.	.	.	.	.	.	1	.	1	
VIRCHOW	17	.	.	.	.	.	.	.	1	3	21	
WASSENAAR	.	.	.	.	.	.	.	.	.	1	1	
WELTEVREDEN	.	3	.	.	.	.	.	2	.	3	8	
WESLACO	.	.	.	1	.	.	.	.	.	1	2	
WESTHAMPTON	.	1	.	.	.	.	.	.	.	.	1	
WORTHINGTON	23	51	68	18	.	.	5	.	.	70	235	
YORUBA	.	.	.	.	.	.	.	.	.	1	1	
YOVOKOME	.	.	.	.	.	.	.	.	.	1	1	
TOTAL	4422	2250	3278	2634	7	94	57	61	87	8207	21097	