

NATIONAL
COMMUNICABLE DISEASE CENTER

SALMONELLA

S U R V E I L L A N C E

CONTENTS...

FOR THE MONTH OF MARCH

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- I. SUMMARY
 - II. REPORTS OF ISOLATIONS FROM THE STATES
 - III. CURRENT INVESTIGATIONS
 - IV. REPORTS FROM THE STATES
 - V. SPECIAL REPORTS
 - VI. INTERNATIONAL
 - VII. FOOD AND FEED SURVEILLANCE

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE/PUBLIC HEALTH SERVICE
Bureau of Disease Prevention and Environmental Control

PREFACE

Summarized in this report is information received from State and City Health Departments, university and hospital laboratories, the National Animal Disease Laboratory (USDA, ARS), Ames, Iowa, and other pertinent sources, domestic and foreign. Much of the information is preliminary. It is intended primarily for the use of those with responsibility for disease control activities. Anyone desiring to quote this report should contact the original investigator for confirmation and interpretation.

Contributions to the Surveillance Report are most welcome. Please address

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TABLE OF CONTENTS

	<u>Page</u>
I. SUMMARY	1
II. REPORTS OF ISOLATIONS FROM THE STATES	
A. Human	1
B. Nonhuman	1
III. CURRENT INVESTIGATIONS	2
NONE	
IV. REPORTS FROM THE STATES	2
NONE	
V. SPECIAL REPORTS	2
NONE	
VI. INTERNATIONAL	2
NONE	
VII. FOOD AND FEED SURVEILLANCE	2
Progress Report on Food and Feed Surveillance Study	

I. SUMMARY

In March 1967, 1411 isolations of salmonellae were reported from humans, an average of 282 isolations per week (Tables I and II). This number represents a decrease of 14 (4.7 percent) from the weekly average of February 1967 and an increase of 7 (2.5 percent) over the weekly average of March 1966.

Reports of 882 nonhuman isolations of salmonellae were received during March, an increase of 111 (14.4 percent) over February 1967 (Tables IV, V, and VI).

II. REPORTS OF ISOLATIONS FROM THE STATES

A. Human

The seven most frequently reported serotypes during March were:

<u>Rank</u>	<u>Serotype</u>	<u>Number</u>	<u>Percent</u>	<u>Rank Last Month</u>
1	<u>S. typhi-murium</u> and <u>S. typhi-murium var.</u> <u>copenhagen</u>	414	29.3	1
2	<u>S. heidelberg</u>	142	10.1	2
3	<u>S. infantis</u>	88	6.2	6
4	<u>S. enteritidis</u>	70	5.0	3
5	<u>S. newport</u>	63	4.5	4
6	<u>S. typhi</u>	54	3.8	5
7	<u>S. blockley</u>	49	3.5	Not listed
Total		880	62.4	
Total (all serotypes)		1411		

The age and sex distribution is shown in Table III.

B. Nonhuman

Thirty-four states reported nonhuman isolations of salmonellae, in which 56 different serotypes were represented.

The seven most frequently reported serotypes during March were:

<u>Rank</u>	<u>Serotype</u>	<u>Predominant Source and Number</u>	<u>Number</u>	<u>Percent</u>	<u>Rank Last Month</u>
1	<u>S. typhi-murium</u> and <u>S. typhi-murium var.</u> <u>copenhagen</u>	cattle (28) and turkeys (22)	106	12.0	2
2	<u>S. derby</u>	swine (63)	94	10.7	1
3	<u>S. heidelberg</u>	turkeys (31)	54	6.1	4
4	<u>S. infantis</u>	chickens (17)	51	5.8	5
5	<u>S. anatum</u>	turkeys (9)	49	5.6	3
6	<u>S. tennessee</u>	dry milk (16)	35	4.0	Not listed
7	<u>S. newington</u>	dry milk (30)	34	3.9	Not listed
Total			423	48.0	
Total (all serotypes)			882		

The most prominent nonhuman sources of salmonellae reported during March were turkeys, 166 (18.8 percent); swine, 136 (15.4 percent); dry milk, 98 (11.1 percent); chickens, 81 (9.2 percent); and bone meal/meat scraps, 62 (7.0 percent).

III. CURRENT INVESTIGATIONS

NONE

IV. REPORTS FROM THE STATES

NONE

V. SPECIAL REPORTS

NONE

VI. INTERNATIONAL

NONE

VII. FOOD AND FEED SURVEILLANCE

Progress Report on Food and Feed Surveillance Study

During March, 187 samples of pet food representing 32 brands were received from North Carolina, Colorado, New Mexico, Virginia, Louisiana, Washington, New York, and Florida and examined for the presence of salmonellae. The types of pet foods were dog (121), cat (37), dog and cat (5), turtle (3), bird (8), fish (8), hamster (4), and dried ant eggs (1). Salmonellae were isolated from 2 brands. Two of 42 samples of the first brand were positive for salmonella groups B and C₁. Three samples of the second brand, "Lolli-Pups Tasty Snacks for Dogs," were tested, and 2 yielded salmonellae. The serotypes isolated were Salmonella typhi-murium, S. heidelberg, and S. anatum. Most probable number studies were done on 1 sample of Lolli-Pups, and the results indicated very low numbers (9 salmonellae/100 gm). Twenty additional boxes of Lolli-Pups were purchased in Atlanta, and 18 of these yielded salmonellae. Serotyping is not yet complete, but the "O" groups identified thus far are B, C₁, C₂, E₂, G, 21, and 35, indicating numerous serotypes.

Editor's Comment: Similar results of persistent contamination of Lolli-Pups with multiple salmonella serotypes were obtained by the U.S. Food and Drug Administration, and all lots of the product have been recalled from the market.

Figure 1.

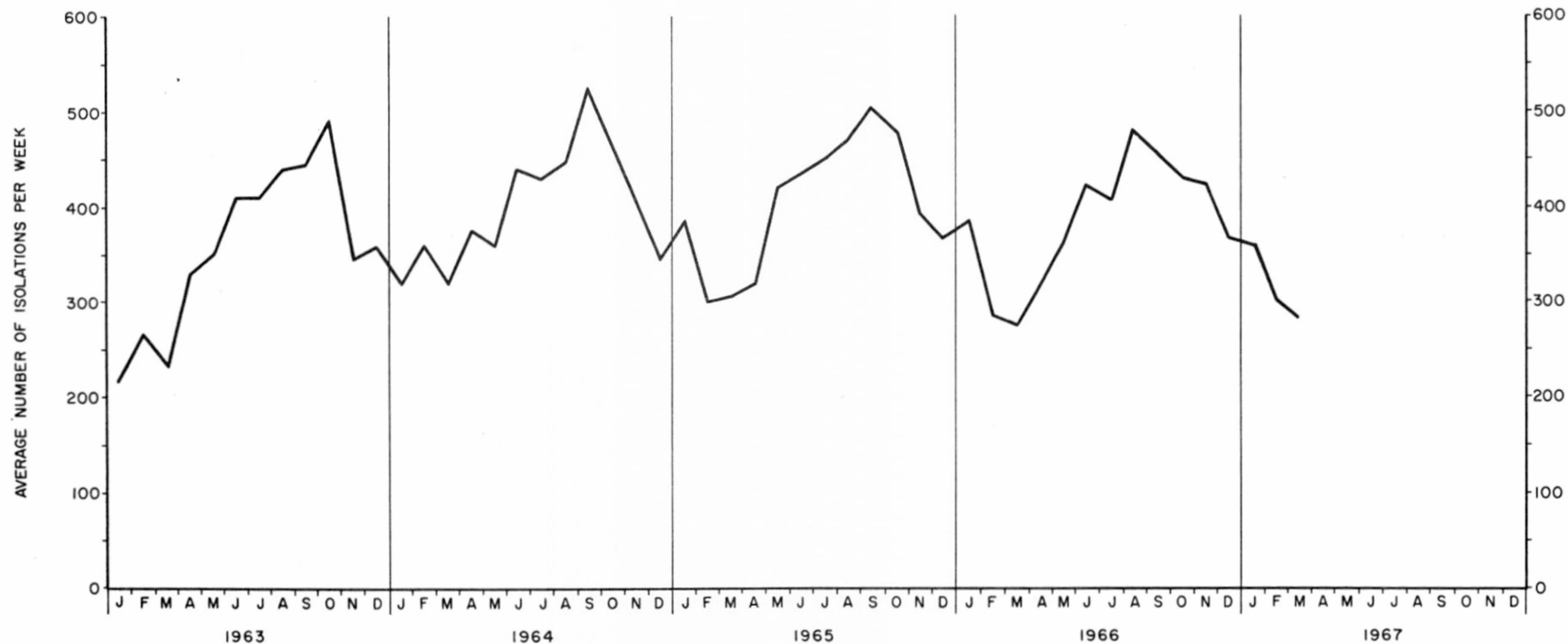


TABLE I
COMMON SALMONELLA SEROTYPES ISOLATED FROM HUMANS IN THE UNITED STATES DURING MARCH, 1967

SEROTYPE	GEOGRAPHIC DIVISION AND REPORTING CENTER																														SEROTYPE										
	NEW ENGLAND						MIDDLE ATLANTIC						EAST NORTH CENTRAL						WEST NORTH CENTRAL						SOUTH ATLANTIC																
	ME	NH	VT	MASS	RI	CONN	TOT	NY-A	NY-BI	NY-C	NJ	PA	TOT	OHIO	IND	ILL	MICH	WIS	TOT	MINN	IOWA	MO	ND	SD	NEBR	KAN	TOT	DEL	MD	DC	VA	WV	NC	SC	GA	FLA	TOT				
anatum										1	1	2				1		1		1						1		1							4	2	7	anatum			
bareilly												1				1																			1		1	bareilly			
berta										1		1						1																		1		1	berta		
blockley	2			4		1	7	4		2		1	7	2		2	2	1	7									1	2		2				2	3	10	blockley			
braenderup						1	1					2	2			1			1																				braenderup		
bredeney						2	2		1			1	2			2		1	3		1															1		1	bredeney		
chester												2	2				1		1		1															1		1	chester		
cholerae-suis v kun																																							cholerae-suis v kun		
cubana								1				1		1	1	1	1		3																		2		4	cubana	
derby									2		3	5				1	1	1	4																				derby		
enteritidis	1			7		3	11	3	9	2	3	17	2	1	9	2	3	17	2		7						9		1	3		6		2		12		enteritidis			
give				3		1	4										2		2								5	6				3		2		4	15	give			
heidelberg			4	6		4	14	3	3	8	7	21	11		7	10	2	30	1											3	4				2	4	15	heidelberg			
indiana												4				1		1																					indiana		
infantis	1			3		4	8		1	1	11	13			6	2	2	10	3		2					9	14		2	3		2		4	2	13		infantis			
java						1	1		2		7	9	3		4		2	9	2								2									3		3	java		
javiana																											1	1								1	2	4	javiana		
kentucky											1		1					11											2								2		2	kentucky	
litchfield												1																				7					7		litchfield		
livingstone																		2																					livingstone		
manhattan				2			2				2	2	4		2			6	1	1	2						4		2	2						1		5	manhattan		
meleagridis																																					2		2	meleagridis	
miami																																					1		1	miami	
mississippi				1		1	2				2	2	1		1		1	3	1																	2	1	5	mississippi		
montevideo																											1												montevideo		
muenchen				2			2		2	1		3		1				1								3	3										1	2	3	muenchen	
newington																1			1							1	1									1		1	newington		
newport									5		3	8	4		2	2	3	11	1		2															5		6	newport		
oranienburg										3							1	2	3																	1	9	11	oranienburg		
panama																		1																					panama		
paratyphi B				2			2											1																		1		2	paratyphi B		
poona																																					1		1	poona	
saint-paul				2		1	3		1		2	3	4		7	5	1	13			2															2		5	saint-paul		
san-diego												1	3		1																							1		1	san-diego
schwarzengrund																		1																					schwarzengrund		
senftenberg				1			1		1			1																									1		1	senftenberg	
tennessee				1			1			3		1	4																										tennessee		
thompson				1		1	2		2	1	1	2	6				2	1	4	1							1	2									1		4	thompson	
typhi				1			1		1	2	1	4	3		2	2		7																		4		9	typhi		
typhi-murium				21	1	10	32	22	28	3	10	63	20	6	31	18	5	80	1	2	15		1			12	31		13	8	1	17	1	10	18	68		typhi-murium			
typhi-murium v cop						2	2				1	1				2		2																					typhi-murium v cop		
urbana															1												1													urbana	
weltevreden																																								weltevreden	
worthington																																					1		1	worthington	
untypable group B	1								2			2			2			2		1																			4	untypable group B	
untypable group C1					1		1																																	untypable group C1	
untypable group C2																																								untypable group C2	
untypable group D		3					3																																untypable group D		
untypable group E																																								untypable group E	
untypable or unknown	1				1		2		1			1					3	3									2												2	untypable or unknown	
Total Common	4	5	4	57	3	32	105	0	49	66	18	66	199	62	11	89	56	29	247	15	3	34	2	1	0	32	87	3	30	11	37	1	37	1	36	64	220	Total Common			
Total Other	0	0	0	1	0	0	1	0	1	0	1	7	9	2	1	2	0	0	5	0	0	1	0	0	0	0	1	0	1	1	0	0	2	0	1	3	8	Total Other			
Grand Total	4	5	4	58	3	32	106	0	50	66	19	73	208	64	12	91	56	29	252	15	3	35	2	1	0	32	88	3	31	12	37	1	39	1	37	67	228	Grand Total			

(New York, A-Albany, BI-Beth Israel, C-City)

*The Beth Israel Salmonella Typing Center in New York is a reference laboratory and processes many cultures from other states which are assigned to the respective states although reported by NY-BI. Beth-Israel reported a total of 77 isolations for March.

TABLE I (Continued)
COMMON SALMONELLA SEROTYPES ISOLATED FROM HUMANS IN THE UNITED STATES DURING MARCH, 1967

SEROTYPE	GEOGRAPHIC DIVISION AND REPORTING CENTER																										TOTAL	% OF TOTAL	JAN. MAR. 1967 TOTAL	% OF JAN. MAR. 1967 TOTAL	JAN. MAR. 1966 TOTAL	% OF JAN. MAR. 1966 TOTAL	SEROTYPE		
	EAST SOUTH CENTRAL					WEST SOUTH CENTRAL					MOUNTAIN								PACIFIC						OTHER										
	KY	TENN	ALA	MISS	TOT	ARK	LA	OKLA	TEX	TOT	MONT	IDA	WYO	COLO	NM	ARI	UTAH	NEV	TOT	WASH	ORE	CAL	ALAS	HAI	TOT	VI									
anatum							3	1		4						1			1						3	3	19	1.3	66	1.6	74	1.8	anatum		
bareilly																						1					3	0.2	11	0.3	12	0.3	bareilly		
berta																											2	0.1	9	0.2	12	0.3	berta		
blockley							2			2										4	3	8		1	16	49	3.5	113	2.8	96	2.4	blockley			
braenderup									1	1												1			2		7	0.5	20	0.5	30	0.7	braenderup		
bredeney																						3			3		8	0.6	33	0.8	28	0.7	bredeney		
chester																						1			1		8	0.6	28	0.7	25	0.6	chester		
cholerae-suis v kun																											3	0.2	3	0.07	7	0.2	cholerae-suis v kun		
cubana	1				1									1													6	0.4	14	0.3	44	1.1	cubana		
derby													1						1					4	5	19	1.3	81	2.0	74	1.8	derby			
enteritidis							1			1												3			3		70	5.0	182	4.5	259	6.4	enteritidis		
give							1			1												1			1		11	0.8	20	0.5	22	0.6	give		
heidelberg	1				1	3	3			6						1	5		6	2	4	36			1	43	142	10.1	365	9.1	279	6.9	heidelberg		
indiana																											5	0.4	14	0.3	20	0.5	indiana		
infantis	2				2	2			4	6	2		4		1			7	1	3	7			4	15	88	6.2	205	5.1	372	9.2	infantis			
java								2		2												4			4		30	2.1	75	1.9	35	0.9	java		
javana							1			6															1		23	1.6	50	1.2	44	1.1	javana		
kentucky									5	6																	3	0.2	8	0.2	4	0.1	kentucky		
litchfield																											10	0.7	20	0.5	14	0.4	litchfield		
livingstone																								9	9		9	0.6	16	0.4	9	0.2	livingstone		
manhattan		2			2	1			1	2											1	2			4	7	30	2.1	83	2.1	28	0.7	manhattan		
meleagridis																											0	0.0	1	0.02	3	0.1	meleagridis		
miami																											2	0.1	7	0.2	16	0.4	miami		
mississippi																											1	0.07	10	0.2	0	0.0	mississippi		
montevideo	1				1	1			1	2							1		1	3					4		21	1.5	43	1.1	71	1.8	montevideo		
muenchen		1			1	1	1		2	4					1				1			6			6		24	1.7	49	1.2	44	1.1	muenchen		
newington						1				1												1					1	0.4	12	0.3	6	0.2	newington		
newport			1		1	2	2		15	19				1		1			3			9			3	12	63	4.5	210	5.2	240	5.9	newport		
oranienburg				1					3	3																	2	1.7	67	1.7	109	2.7	oranienburg		
panama																						2			7	8	13	0.9	52	1.3	42	1.0	panama		
paratyphi B																											4	0.3	24	0.6	31	0.8	paratyphi B		
poona																						1			1		3	0.2	13	0.3	13	0.3	poona		
saint-paul						1				1							1			2	2	1			2	7	36	2.6	175	4.3	131	3.2	saint-paul		
san-diego																						4					1	5	10	0.7	27	0.7	21	0.5	san-diego
schwarzengrund																						2			1	3	5	0.4	17	0.4	13	0.3	schwarzengrund		
senftenberg																					1				1		3	0.2	10	0.2	17	0.5	senftenberg		
tennessee																											6	0.4	23	0.6	26	0.6	tennessee		
thompson					4	2	4	1	2	9				1	1				2						3		21	1.5	71	1.8	116	2.9	thompson		
typhi																												54	3.8	157	3.9	166	4.1	typhi	
typhi-murium		1			1	1	3	3	20	27	2	4		9	1				15	27	6	52		4	89		406	28.8	1,169	29.0	1,169	28.8	typhi-murium		
typhi-murium v cop						2	1			3																		8	0.6	63	1.6	29	0.7	typhi-murium v cop	
urbana																											3	0.2	3	0.07	0	0.0	urbana		
weltevreden																												14	1.0	23	0.6	3	0.07	weltevreden	
worthington						1				1																		4	0.3	9	0.5	12	0.3	worthington	
untypable group B						12				12									8			1	1		2		32	2.3	85	2.1	69	1.7	untypable group B		
untypable group C1															16				16									17	1.2	80	2.0	30	0.7	untypable group C1	
untypable group C2						1				1					2				2									3	0.2	9	0.2	7	0.2	untypable group C2	
untypable group D																						2			2			10	0.7	16	0.4	8	0.2	untypable group D	
untypable group E															3				3				1					4	0.3	6	0.2	3	0.07	untypable group E	
untypable or unknown			3		3				4	4											1							18	1.3	43	1.1	21	0.5	untypable or unknown	
Total Common	4	8	2	4	18	22	29	10	58	119	2	6	0	16	30	5	8	0	67	36	24	174	2	61	297	1,359	96.3	3,890	96.5	3,917	96.6	Total Common			
Total Other	0	0	0	0	0	0	4	0	7	11	0	0	0	2	1	0	1	0	4	1	0	8	0	4	13		52	3.7	140	3.5	137	3.4	Total Other		
Grand Total	4	8	2	4	18	22	33	10	65	130	2	6	0	18	31	5	9	0	71	37	24	182	2	65	310	1,411		4,030		4,054		Grand Total			

TABLE II
OTHER SALMONELLA SEROTYPES ISOLATED FROM HUMANS DURING MARCH 1967

SERO TYPE	REPORTING CENTER																				MARCH TOTAL	JAN.- MARCH 1967 TOTAL	SERO TYPE				
	CALIF	COLO	DC	FLA	GA	HAI	ILL	IND	LA	MD	MASS	MO	NJ	NM	NY-BI	NC	OHIO	PA	TEX	UTAH				WASH			
albany	1				1		1												2				1	2	albany		
atlanta							1																1	atlanta			
berlin							2																2	berlin			
binza							1																4	binza			
bovis-morbificans							1																1	bovis-morbificans			
bradford		1						1													1	1		1	1	bradford	
cerro																								1	2	cerro	
colorado																								1	1	colorado	
denver																								1	1	denver	
durban																								1	2	durban	
durham									1	1						2						1			1	5	durham
eimsbuettel																									3	6	eimsbuettel
gaminara																									1	2	gaminara
georgia																									1	1	georgia
hartford																									3	6	hartford
irumu	1	1	1			2																			3	3	irumu
johannesburg																									1	2	johannesburg
loma-linda																									1	1	loma-linda
lomita																									1	1	lomita
madelia																									1	1	madelia
minnesota	1			1													2								2	6	minnesota
mission																									2	5	mission
muenster																									1	11	muenster
orion																									1	1	orion
oslo																									1	4	oslo
pensacola	2								1		1														1	2	pensacola
reading																									4	16	reading
rubislaw																									4	6	rubislaw
saphra																									1	1	saphra
simsbury																									1	1	simsbury
singapore	1												1												1	1	singapore
stanley																									1	2	stanley
tallahassee																									1	2	tallahassee
wagenia																									1	1	wagenia
untypable group H																									1	2	untypable group H
TOTAL	8	2	1	3	1	4	2	1	4	1	1	1	1	1	1	2	2	7	7	1	1	52	140	TOTAL			

NY-BI = New York-Beth Israel

TABLE III

Age and Sex Distribution of Individuals Reported as Harboring Salmonellae
During March 1967

<u>Age (Years)</u>	<u>Male</u>	<u>Female</u>	<u>Unknown</u>	<u>Total</u>	<u>Percent</u>	<u>Cumulative Percent</u>
< 1	120	90	5	215	21.4	21.4
1 - 4	161	120	1	282	28.0	49.4
5 - 9	55	48		103	10.2	59.6
10 - 19	42	48		90	8.9	68.5
20 - 29	32	54		86	8.5	77.0
30 - 39	25	37		62	6.2	83.2
40 - 49	21	26		47	4.7	87.9
50 - 59	25	27		52	5.2	93.1
60 - 69	17	17		34	3.4	96.5
70 - 79	6	17		23	2.3	98.8
80 +	<u>5</u>	<u>7</u>	<u> </u>	<u>12</u>	1.2	100.0
Subtotal	509	491	6	1006		
Child (Unspec.)	3	4	2	9		
Adult (Unspec.)	6	7		13		
Unknown	<u>173</u>	<u>166</u>	<u>44</u>	<u>383</u>		
Total	691	668	52	1411		
Percent of Total	50.8	49.2				

TABLE IV
REPORTED NONHUMAN ISOLATES BY SEROTYPE AND SOURCE, *MARCH 1967

SEROTYPE	chicken	turkey	duck	pigeon	domestic fowl environment	avian	equine	bovine	ovine	porcine	goat	canine	feline	lab mouse	lab rat	guinea pig	rabbit	monkey	hamster	raccoon	squirrel	muskrat	fox	wildcat	deer	javelina	antelope	animal environment unknown	animal unknown	egg	powdered egg	frozen egg	powdered albumen	sausage	muffin mix	
alachua		1				2																									2					
albany		1																																		
amager																																				
anatum	2	9						4		6														1					1	4						
arkansas																																				
bareilly																																				
binza	1		1																								1									
blockley	7	6																																		
braenderup																																				
bredeney	2	5								7																									1	
california																																				
cerro																																				
chester																																				
cholerae-suis																																				
cholerae-suis v kun																																				
cubana																																				
derby	2	1						16	1	63				1																					1	
duesseldorf		2																																		
eimsbuettel	6					7						1																								
enteritidis	3													3																						
give																																				
heidelberg	5	31						4		1										1	1															
infantis	17	2			10		1	2																												
java																																				
kentucky	1					2																														
lexington																																				
litchfield																																				
livingstone	8	1	3																																	
manhattan																																				
meleagridis		2				1				2																										
minnesota																																				
montevideo	2	1	4					1		2																										
muenchen	1	3																																		
newington		1																																		
newport		1				1	6			1					1	1															2	1			1	
oranienburg	1									2																										
orion																																				
panama																																				
pullorum		9																																		
reading	6	2	7																																	
rubislaw																																				
saint-paul	1	17								1																										
san-diego		10											1																							
schwarzengrund	2	15																																		
senftenberg		4								1																										
siegburg																																				
simsbury																																				
tennessee	1	2																																		
thomasville																																				
thompson	4	2	1		1																															3
typhi-murium	6	7				11	7	28		13	1	2				1		1									2									
typhi-murium v cop	3	15		1						4																										
typhi-suis																																				
urbana																																				
westhampton																																				
worthington			2																																	
untypable group C-1																																				
unknown																																				
TOTAL	81	166	9	1	11	23	9	61	1	136	1	4	1	4	1	1	1	2	1	1	1	1	1	1	1	1	1	2	1	1	11	13	6	1	1	5

Source: National Disease Laboratory, Ames, Iowa, weekly Salmonella Reports from individual states and
US-FDA-Div of Microbiology, Washington, D. C.

*Includes February late reports.

TABLE V
REPORTED NONHUMAN ISOLATES BY SEROTYPE AND STATE, *MARCH 1967

SEROTYPE	ALA	ARIZ	ARK	CAL	COL	CONN	DC	FLA	HAI	IDA	ILL	IND	IOWA	KAN	LA	MD	MASS	MICH	MINN	MISS	MO	NEB	NJ	NY-A	NC	OHIO	OKLA	ORE	PA	UTAH	VT	VA	WASH	WTSC	TOTAL	3 MOS. TOTAL	SEROTYPE	
alachua			1	1								10			1			2	2	14						2								1	16	68	alachua	
albany																																			17	21	albany	
amager											4																								4	4	amager	
anatum		2	3	11		4			2		11	1			5			4			1									3					49	144	anatum	
arkansas															1																				1	1	arkansas	
bareilly											2																								2	9	bareilly	
binza						4					7					2								1							2				16	70	binza	
blockley				12					1																						1				15	22	blockley	
braenderup				1		1			6																									8	30	braenderup		
bredeney			1	3		3					3		2		5				2												2			21	70	bredeney		
california											1																								1	3	california	
cerro											1	1																						3	31	cerro		
chester				3																						1					1			6	11	chester		
cholerae-suis																					1													1	3	cholerae-suis		
cholerae-suis v kun			1	1							2	4	2								1													11	21	cholerae-suis v kun		
cubana				4		1		1			3	6		1			8	4	1															29	121	cubana		
derby		5		3						1	4	2			72										1									94	293	derby		
duesseldorf																																			8	8	duesseldorf	
eimsbuettel			1	2	1	2	3				10	3			1				2											1				21	72	eimsbuettel		
enteritidis											2																								7	18	enteritidis	
give			1																																4	25	give	
heidelberg			4		16		1					2	6		1				15		1													54	146	heidelberg		
infantis			1	1	5						12	6			5				2		2		10					1		1				51	137	infantis		
java																																			1	2	java	
kentucky			1	2							3								1																7	21	kentucky	
lexington				3							1																								4	8	lexington	
litchfield																																			1	2	litchfield	
livingstone				5																															12	27	livingstone	
manhattan																																			3	6	manhattan	
meleagridis				1			3					1			2												1								8	13	meleagridis	
minnesota											1																									2	11	minnesota
montevideo	2			3							4	7	3		1	3	6		1	1		1				1								31	88	montevideo		
muenchen				3					1			1																							11	31	muenchen	
newington				1							1							30		1														34	67	newington		
newport				3					2						1																				11	55	newport	
oranienburg				3							2	1	1		1				1								2								15	78	oranienburg	
orion											2																								4	5	orion	
panama			8																		1														9	39	panama	
pullorum																																				8	11	pullorum
reading				1							1							6					1					2		3		1	1		8	45	reading	
rubislaw																																				1	3	rubislaw
saint-paul				1	2						1					1			3		1		2	1					6		3			25	58	saint-paul		
san-diego				11								1							1										1		1				15	26	san-diego	
schwarzengrund			1	15							2	1	1		1			1	1		1								1		1			26	54	schwarzengrund		
senftenberg				1		1	3				2				1			6	4																19	56	senftenberg	
siegburg																		1																	3	19	siegburg	
simsbury																																			1	1	simsbury	
tennessee			1			1					8	2			6	1					1		2	14											35	57	tennessee	
thomasville											1																								2	5	thomasville	
thompson			1	5								3				1														3	3				16	50	thompson	
typhi-murium		7	4	24		2			9	1	4	8		3	8	1			1		2		3			3									87	243	typhi-murium	
typhi-murium v cop			4																	14															19	44	typhi-murium v cop	
typhi-suis				4																															4	5	typhi-suis	
urbana				2		2																													4	6	urbana	
westhampton											1																								1	11	westhampton	
worthington			1		1						5	2																								11	51	worthington
untypable group C1															2	1																			3	24	untypable group C1	
unknown											2																								2	3	unknown	
Total	2	23	27	152	1	22	9	1	21	2	101	64	16	130	14	17	8	50	58	14	17	15	17	2	1	20	3	10	8	37	1	8	7	21	882	2,632	Total	

*Includes February late reports.
(NYA - New York - Albany)

Source: National Disease Laboratory, Ames, Iowa, weekly Salmonella Reports from individual states and US-FDA-Div. of Microbiology, Washington, D.C.

TABLE VI
OTHER SEROTYPES REPORTED DURING 1967
FROM NONHUMAN SOURCES

SEROTYPE	MONTH(S)	REPORTING CENTER(S)	NUMBER OF ISOLATIONS
berta	Jan	Ill(1)	
	Feb	Ariz(1)	2
carrau	Jan	La	1
champaign	Feb	Minn	1
corvallis	Jan-Feb	La	3
drypool	Jan	Conn(1)	
	Jan-Feb	Ohio(2)	
	Feb	La(1)	4
eastbourne	Jan	Minn	1
gallinarum	Jan-Feb	Ark	2
grumpensis	Jan	La	2
hartford	Jan	Hai	1
indiana	Jan	Ind(2)	
	Jan	NC(1)	3
javiana	Jan-Feb	La(7)	
	Feb	Mo(1)	8
johannesburg	Jan	Utah	1
minneapolis	Feb	Ohio	9
mississippi	Feb	La	2
mokola	Feb	La	1
muenster	Jan	Ark(2)	
	Jan-Feb	La(4)	6
new-haw	Feb	Iowa	1
okerara	Feb	La	1
oslo	Feb	Fla	2
pomona	Jan	La	1
poona	Jan	Fla(4)	
	Jan	Ill(1)	
	Jan	Neb(3)	
	Feb	Mo(1)	9
redlands	Feb	La	1
shubra	Feb	La	1
taksony	Jan-Feb	Utah	2
tucson	Feb	Cal	1
tuindorp	Feb	Ill	1
vejle	Feb	La	1
wichita	Feb	Utah	1
Total			69