Table 5A. Distribution of MICs and Occurrence of Resistance for Top Serotypes Tested from Chicken, 2007

Antimicrobial	Isolate Source (# of Isolates)	%I[1]	%R[2]	95% CI[3]	Distribution (%) of MICs (µg/ml)[4] 0.015	0.03	0.06	0.125	0.25	0.50	1	2	4	8	16	32	64	128	256	512	1024
Aminoglycosides																					
Amikacin	Kentucky (443)	0.0	**0.0**	0.0-1.1						36.1	58.0	5.9									
	Heidelberg (142)	0.0	**0.0**	0.0-3.3						43.0	47.9	8.5	0.7								
	Enteritidis (124)	0.0	**0.0**	0.0-3.7						39.5	55.6	4.8									
	Typhimurium var. 5- (50)	0.0	**0.0**	0.0-8.9						62.0	36.0	2.0									
	4,[5],12:i:- (49)	0.0	**0.0**	0.0-9.1						16.3	73.5	10.2									
	Typhimurium (33)	0.0	**0.0**	0.0-13.0						42.4	48.5	9.1									
	Montevideo (20)	0.0	**0.0**	0.0-20.0							90.0	10.0									
	Infantis (16)	0.0	**0.0**	0.0-24.1						43.8	50.0	6.2									
	Berta (13)	0.0	**0.0**	0.0-28.3						30.8	61.5	7.7									
	Mbandaka (11)	0.0	**0.0**	0.0-32.1							100.0										
	Schwarzengrund (11)	0.0	**0.0**	0.0-32.1						18.2	81.8										
Gentamicin	Kentucky (443)	0.2	**3.4**	2.0-5.7					85.8	9.3	0.9		0.5	0.2	**2.5**	**0.9**					
	Heidelberg (142)	2.8	**11.3**	6.8-18.0					73.9	12.0				2.8	**7.7**	**3.5**					
	Enteritidis (124)	0.0	**0.0**	0.0-3.7					95.2	4.0			0.8								
	Typhimurium var. 5- (50)	0.0	**2.0**	0.1-12.0					92.0	6.0					**2.0**						
	4,[5],12:i:- (49)	0.0	**0.0**	0.0-9.1					87.8	12.2											
	Typhimurium (33)	0.0	**6.1**	1.1-21.7					87.9	6.1					**6.1**						
	Montevideo (20)	0.0	**20.0**	6.6-44.3					50.0	30.0					**5.0**	**15.0**					
	Infantis (16)	0.0	**0.0**	0.0-24.1					87.5	6.2	6.2										
	Berta (13)	0.0	**0.0**	0.0-28.3					92.3				7.7								
	Mbandaka (11)	0.0	**9.1**	0.5-42.9					63.6	27.3						**9.1**					
	Schwarzengrund (11)	0.0	**9.1**	0.5-42.9					63.6	18.2	9.1					**9.1**					
Kanamycin	Kentucky (443)	0.0	**2.0**	1.0-3.9										97.7	0.2			**2.0**			
	Heidelberg (142)	0.0	**6.3**	3.1-12.0										93.0	0.7		**1.4**	**4.9**			
	Enteritidis (124)	0.0	**0.0**	0.0-3.7										99.2	0.8						
	Typhimurium var. 5- (50)	0.0	**10.0**	3.7-22.6										90.0				**10.0**			
	4,[5],12:i:- (49)	0.0	**4.1**	0.7-15.2										95.9				**4.1**			
	Typhimurium (33)	0.0	**3.0**	0.2-17.5										93.9	3.0			**3.0**			
	Montevideo (20)	0.0	**10.0**	1.8-33.1										85.0	5.0			**10.0**			
	Infantis (16)	0.0	**0.0**	0.0-24.1										100.0							
	Berta (13)	0.0	**0.0**	0.0-28.3										100.0							
	Mbandaka (11)	0.0	**9.1**	0.5-42.9										90.9				**9.1**			
	Schwarzengrund (11)	0.0	**9.1**	0.5-42.9										90.9				**9.1**			
Streptomycin	Kentucky (443)	N/A	**32.5**	28.2-37.1												67.5	**29.8**	**2.7**			
	Heidelberg (142)	N/A	**13.4**	8.5-20.4												86.6	**7.0**	**6.3**			
	Enteritidis (124)	N/A	**0.8**	0.0-5.1												99.2	**0.8**				
	Typhimurium var. 5- (50)	N/A	**10.0**	3.7-22.6												90.0	**8.0**	**2.0**			
	4,[5],12:i:- (49)	N/A	**8.2**	2.7-20.5												91.8	**6.1**	**2.0**			
	Typhimurium (33)	N/A	**12.1**	3.9-29.1												87.9	**12.1**				
	Montevideo (20)	N/A	**10.0**	1.8-33.1												90.0	**5.0**	**5.0**			
	Infantis (16)	N/A	**0.0**	0.0-24.1												100.0					
	Berta (13)	N/A	**0.0**	0.0-28.3												100.0					
	Mbandaka (11)	N/A	**9.1**	0.5-42.9												90.9	**9.1**				
	Schwarzengrund (11)	N/A	**9.1**	0.5-42.9												90.9	**9.1**				

[1] Percent of isolates with intermediate susceptibility

[2] Percent of isolates that were resistant

[3] 95% confidence intervals for percent resistant (%R) were calculated using the Wilson interval with continuity correction method

[4] The unshaded areas indicate the range of dilutions tested for each antimicrobial. Single vertical bars indicate the breakpoints for susceptibility, while double vertical bars indicate the breakpoints for resistance. Numbers in the shaded area indicate the percentages of isolates with MICs greater than the highest tested concentrations. Numbers listed for the lowest tested concentrations represent the percentages of isolates with MICs equal to or less than the lowest tested concentration. CLSI breakpoints were used when available. There are no CLSI breakpoints for streptomycin.

Table 5A (continued). Distribution of MICs and Occurrence of Resistance for Top Serotypes Tested from Chicken, 2007

Antimicrobial	Isolate Source (# of Isolates)	%I[1]	%R[2]	95% CI[3]	Distribution (%) of MICs (µg/ml)[4] 0.015	0.03	0.06	0.125	0.25	0.50	1	2	4	8	16	32	64	128	256	512	1024
Aminopenicillins																					
Ampicillin	Kentucky (443)	0.0	**20.1**	16.5-24.2							77.9	1.6	0.2	0.2		**0.2**	**19.9**				
	Heidelberg (142)	0.0	**20.4**	14.3-28.1							78.2	1.4					**19.7**	**0.7**			
	Enteritidis (124)	0.0	**1.6**	0.3-6.3							93.5	4.0	0.8				**1.6**				
	Typhimurium var. 5- (50)	0.0	**50.0**	35.7-64.3							50.0						**50.0**				
	4,[5],12:i:- (49)	0.0	**20.4**	10.7-34.8							77.6	2.0					**20.4**				
	Typhimurium (33)	0.0	**18.2**	7.6-36.1							72.7	9.1					**18.2**				
	Montevideo (20)	0.0	**0.0**	0.0-20.0							95.0	5.0									
	Infantis (16)	0.0	**0.0**	0.0-24.1							100.0										
	Berta (13)	0.0	**7.7**	0.4-37.9							84.6	7.7					**7.7**				
	Mbandaka (11)	0.0	**0.0**	0.0-32.1							100.0										
	Schwarzengrund (11)	0.0	**0.0**	0.0-32.1							81.8	18.2									
β-Lactam/β-Lactamase Inhibitor Combinations																					
Amoxicillin-Clavulanic Acid	Kentucky (443)	0.0	**19.9**	16.3-24.0							79.0	0.7	0.2	0.2		**1.8**	**18.1**				
	Heidelberg (142)	0.0	**17.6**	11.9-25.1							78.9	0.7		2.8		**2.8**	**14.8**				
	Enteritidis (124)	0.0	**0.0**	0.0-3.7							97.6	0.8		1.6							
	Typhimurium var. 5- (50)	2.0	**46.0**	32.1-60.5							50.0			2.0	2.0	**4.0**	**42.0**				
	4,[5],12:i:- (49)	2.0	**16.3**	7.8-30.2							75.5	4.1	2.0		2.0		**16.3**				
	Typhimurium (33)	0.0	**15.2**	5.7-32.7							81.8			3.0			**15.2**				
	Montevideo (20)	0.0	**0.0**	0.0-20.0							100.0										
	Infantis (16)	0.0	**0.0**	0.0-24.1							100.0										
	Berta (13)	0.0	**0.0**	0.0-28.3							92.3			7.7							
	Mbandaka (11)	0.0	**0.0**	0.0-32.1							100.0										
	Schwarzengrund (11)	0.0	**0.0**	0.0-32.1							100.0										
Cephalosporins																					
Ceftiofur	Kentucky (443)	0.2	**19.9**	16.3-24.0				0.2	8.4	63.4	7.7	0.2	0.2	**2.3**	**17.6**						
	Heidelberg (142)	0.0	**16.9**	11.3-24.3						66.9	16.2			**1.4**	**15.5**						
	Enteritidis (124)	1.6	**0.0**	0.0-3.7					0.8	12.1	85.5		1.6								
	Typhimurium var. 5- (50)	2.0	**44.0**	30.3-58.7						42.0	12.0		2.0	**20.0**	**24.0**						
	4,[5],12:i:- (49)	0.0	**16.3**	7.8-30.2						71.4	12.2			**6.1**	**10.2**						
	Typhimurium (33)	0.0	**15.2**	5.7-32.7				3.0		42.4	39.4				**15.2**						
	Montevideo (20)	0.0	**0.0**	0.0-20.0						70.0	30.0										
	Infantis (16)	0.0	**0.0**	0.0-24.1						6.2	93.8										
	Berta (13)	0.0	**0.0**	0.0-28.3						84.6	15.4										
	Mbandaka (11)	0.0	**0.0**	0.0-32.1						9.1	90.9										
	Schwarzengrund (11)	0.0	**0.0**	0.0-32.1						72.7	27.3										
Ceftriaxone	Kentucky (443)	13.3	**0.2**	0.0-1.4					79.7	0.5			0.5	5.9	11.3	2.0	**0.2**				
	Heidelberg (142)	12.0	**1.4**	0.2-5.5					82.4				0.7	3.5	8.5	3.5	**1.4**				
	Enteritidis (124)	0.0	**0.0**	0.0-3.7					100.0												
	Typhimurium var. 5- (50)	20.0	**0.0**	0.0-8.9					54.0				4.0	22.0	16.0	4.0					
	4,[5],12:i:- (49)	10.2	**0.0**	0.0-9.1					83.7					6.1	8.2	2.0					
	Typhimurium (33)	12.1	**0.0**	0.0-13.0					84.8					3.0	12.1						
	Montevideo (20)	0.0	**0.0**	0.0-20.0					100.0												
	Infantis (16)	0.0	**0.0**	0.0-24.1					100.0												
	Berta (13)	0.0	**0.0**	0.0-28.3					100.0												
	Mbandaka (11)	0.0	**0.0**	0.0-32.1					100.0												
	Schwarzengrund (11)	0.0	**0.0**	0.0-32.1					100.0												

[1] Percent of isolates with intermediate susceptibility

[2] Percent of isolates that were resistant

[3] 95% confidence intervals for percent resistant (%R) were calculated using the Wilson interval with continuity correction method

[4] The unshaded areas indicate the range of dilutions tested for each antimicrobial. Single vertical bars indicate the breakpoints for susceptibility, while double vertical bars indicate the breakpoints for resistance. Numbers in the shaded area indicate the percentages of isolates with MICs greater than the highest tested concentrations. Numbers listed for the lowest tested concentrations represent the percentages of isolates with MICs equal to or less than the lowest tested concentration. CLSI breakpoints were used when available. There are no CLSI breakpoints for streptomycin.

Table 5A (continued). Distribution of MICs and Occurrence of Resistance for Top Serotypes Tested from Chicken, 2007

Antimicrobial	Isolate Source (# of Isolates)	%I[1]	%R[2]	[95% CI][3]	Distribution (%) of MICs (µg/ml)[4] 0.015	0.03	0.06	0.125	0.25	0.50	1	2	4	8	16	32	64	128	256	512	1024
Cephamycins																					
Cefoxitin	Kentucky (443)	3.6	**16.3**	13.1-20.1						0.5	16.9	46.7	14.7	1.4	3.6	**13.5**	**2.7**				
	Heidelberg (142)	0.0	**16.9**	11.3-24.3							19.7	39.4	18.3	5.6		**7.7**	**9.2**				
	Enteritidis (124)	0.0	**0.0**	0.0-3.7							1.6	65.3	24.2	8.9							
	Typhimurium var. 5- (50)	12.0	**30.0**	18.3-44.8							2.0	22.0	28.0	6.0	12.0	**26.0**	**4.0**				
	4,[5],12:i:- (49)	0.0	**16.3**	7.8-30.2							8.2	46.9	22.4	6.1		**14.3**	**2.0**				
	Typhimurium (33)	0.0	**15.2**	5.7-32.7							9.1	42.4	21.2	12.1		**15.2**					
	Montevideo (20)	0.0	**0.0**	0.0-20.0								75.0	20.0	5.0							
	Infantis (16)	0.0	**0.0**	0.0-24.1									87.5	12.5							
	Berta (13)	0.0	**0.0**	0.0-28.3							15.4	61.5	23.1								
	Mbandaka (11)	0.0	**0.0**	0.0-32.1									100.0								
	Schwarzengrund (11)	0.0	**0.0**	0.0-32.1								54.5	45.5								
Folate Pathway Inhibitors																					
Sulfonamides	Kentucky (443)	N/A	**3.8**	2.3-6.2											43.6	48.5	4.1			**3.8**	
	Heidelberg (142)	N/A	**13.4**	8.5-20.4											69.7	16.9				**13.4**	
	Enteritidis (124)	N/A	**0.8**	0.0-5.1											21.8	64.5	12.9			**0.8**	
	Typhimurium var. 5- (50)	N/A	**70.0**	55.2-81.7											20.0	10.0				**70.0**	
	4,[5],12:i:- (49)	N/A	**6.1**	1.6-17.8											18.4	69.4	6.1			**6.1**	
	Typhimurium (33)	N/A	**45.5**	28.6-63.4											15.2	36.4	3.0			**45.5**	
	Montevideo (20)	N/A	**10.0**	1.8-33.1											45.0	45.0				**10.0**	
	Infantis (16)	N/A	**0.0**	0.0-24.1											18.8	56.2	25.0				
	Berta (13)	N/A	**7.7**	0.4-37.9											46.2	46.2				**7.7**	
	Mbandaka (11)	N/A	**9.1**	0.5-42.9												72.7	18.2			**9.1**	
	Schwarzengrund (11)	N/A	**9.1**	0.5-42.9											27.3	54.5	9.1			**9.1**	
Trimethoprim-Sulfamethoxazole	Kentucky (443)	N/A	**0.0**	0.0-1.1				90.7	8.6	0.7											
	Heidelberg (142)	N/A	**0.0**	0.0-3.3				87.3	10.6	2.1											
	Enteritidis (124)	N/A	**0.0**	0.0-3.7				91.1	8.9												
	Typhimurium var. 5- (50)	N/A	**0.0**	0.0-8.9				64.0	18.0	16.0	2.0										
	4,[5],12:i:- (49)	N/A	**0.0**	0.0-9.1				87.8	12.2												
	Typhimurium (33)	N/A	**0.0**	0.0-13.0				75.8	9.1	12.1	3.0										
	Montevideo (20)	N/A	**0.0**	0.0-20.0				90.0	10.0												
	Infantis (16)	N/A	**0.0**	0.0-24.1				93.8	6.2												
	Berta (13)	N/A	**0.0**	0.0-28.3				92.3	7.7												
	Mbandaka (11)	N/A	**0.0**	0.0-32.1				81.8	18.2												
	Schwarzengrund (11)	N/A	**0.0**	0.0-32.1				90.9	9.1												

[1] Percent of isolates with intermediate susceptibility

[2] Percent of isolates that were resistant

[3] 95% confidence intervals for percent resistant (%R) were calculated using the Wilson interval with continuity correction method

[4] The unshaded areas indicate the range of dilutions tested for each antimicrobial. Single vertical bars indicate the breakpoints for susceptibility, while double vertical bars indicate the breakpoints for resistance. Numbers in the shaded area indicate the percentages of isolates with MICs greater than the highest tested concentrations. Numbers listed for the lowest tested concentrations represent the percentages of isolates with MICs equal to or less than the lowest tested concentration. CLSI breakpoints were used when available. There are no CLSI breakpoints for streptomycin.

Table 5A (continued). Distribution of MICs and Occurrence of Resistance for Top Serotypes Tested from Chicken, 2007

Antimicrobial	Isolate Source (# of Isolates)	%I[1]	%R[2]	[95% CI][3]	Distribution (%) of MICs (µg/ml)[4] 0.015	0.03	0.06	0.125	0.25	0.50	1	2	4	8	16	32	64	128	256	512	1024
Phenicols																					
Chloramphenicol	Kentucky (443)	0.2	**2.0**	1.0-3.9								9.7	82.6	5.4	0.2	**0.2**	**1.8**				
	Heidelberg (142)	0.7	**4.2**	1.7-9.3									22.5	72.5	0.7		**4.2**				
	Enteritidis (124)	0.0	**0.0**	0.0-3.7								0.8	50.8	48.4							
	Typhimurium var. 5- (50)	2.0	**2.0**	0.1-12.0								4.0	54.0	38.0	2.0		**2.0**				
	4,[5],12:i:- (49)	0.0	**0.0**	0.0-9.1									49.0	51.0							
	Typhimurium (33)	0.0	**0.0**	0.0-13.0								6.1	42.4	51.5							
	Montevideo (20)	0.0	**0.0**	0.0-20.0									35.0	65.0							
	Infantis (16)	6.2	**0.0**	0.0-24.1										93.8	6.2						
	Berta (13)	0.0	**0.0**	0.0-28.3									69.2	30.8							
	Mbandaka (11)	0.0	**0.0**	0.0-32.1										100.0							
	Schwarzengrund (11)	0.0	**0.0**	0.0-32.1									72.7	27.3							
Quinolones																					
Ciprofloxacin	Kentucky (443)	0.0	**0.0**	0.0-1.1	88.9	10.6	0.2	0.2													
	Heidelberg (142)	0.0	**0.0**	0.0-3.3	75.4	18.3	6.3														
	Enteritidis (124)	0.0	**0.0**	0.0-3.7	55.6	41.1	3.2														
	Typhimurium var. 5- (50)	0.0	**0.0**	0.0-8.9	64.0	32.0	4.0														
	4,[5],12:i:- (49)	0.0	**0.0**	0.0-9.1	73.5	26.5															
	Typhimurium (33)	0.0	**0.0**	0.0-13.0	69.7	30.3															
	Montevideo (20)	0.0	**0.0**	0.0-20.0	90.0	10.0															
	Infantis (16)	0.0	**0.0**	0.0-24.1	87.5	6.2	6.2														
	Berta (13)	0.0	**0.0**	0.0-28.3	84.6	15.4															
	Mbandaka (11)	0.0	**0.0**	0.0-32.1	81.8	18.2															
	Schwarzengrund (11)	0.0	**0.0**	0.0-32.1	81.8	18.2															
Nalidixic Acid	Kentucky (443)	N/A	**0.2**	0.0-1.4							2.7	66.1	29.3	1.6			**0.2**				
	Heidelberg (142)	N/A	**0.0**	0.0-3.3								12.0	66.2	21.8							
	Enteritidis (124)	N/A	**0.0**	0.0-3.7								8.1	75.8	16.1							
	Typhimurium var. 5- (50)	N/A	**0.0**	0.0-8.9							2.0	22.0	40.0	34.0	2.0						
	4,[5],12:i:- (49)	N/A	**0.0**	0.0-9.1								46.9	28.6	22.4	2.0						
	Typhimurium (33)	N/A	**0.0**	0.0-13.0								36.4	33.3	27.3	3.0						
	Montevideo (20)	N/A	**0.0**	0.0-20.0								25.0	70.0	5.0							
	Infantis (16)	N/A	**0.0**	0.0-24.1								50.0	37.5	12.5							
	Berta (13)	N/A	**0.0**	0.0-28.3								61.5	30.8	7.7							
	Mbandaka (11)	N/A	**0.0**	0.0-32.1								63.6	27.3	9.1							
	Schwarzengrund (11)	N/A	**0.0**	0.0-32.1								36.4	36.4	27.3							
Tetracyclines																					
Tetracycline	Kentucky (443)	2.5	**56.9**	52.1-61.5									40.6	2.5	**0.2**	**1.4**	**55.3**				
	Heidelberg (142)	0.7	**12.7**	7.9-19.6									86.6	0.7	**1.4**	**1.4**	**9.9**				
	Enteritidis (124)	0.8	**2.4**	0.6-7.4									96.8	0.8	**0.8**	**0.8**	**0.8**				
	Typhimurium var. 5- (50)	0.0	**68.0**	53.2-80.1									32.0			**8.0**	**60.0**				
	4,[5],12:i:- (49)	0.0	**14.3**	6.4-27.9									85.7		**2.0**	**2.0**	**10.2**				
	Typhimurium (33)	0.0	**48.5**	31.2-66.2									51.5			**3.0**	**45.5**				
	Montevideo (20)	0.0	**10.0**	1.8-33.1									90.0				**10.0**				
	Infantis (16)	0.0	**0.0**	0.0-24.1									100.0								
	Berta (13)	7.7	**0.0**	0.0-28.3									92.3	7.7							
	Mbandaka (11)	0.0	**27.3**	7.3-60.7									72.7				**27.3**				
	Schwarzengrund (11)	0.0	**9.1**	0.5-42.9									90.9				**9.1**				

[1] Percent of isolates with intermediate susceptibility

[2] Percent of isolates that were resistant

[3] 95% confidence intervals for percent resistant (%R) were calculated using the Wilson interval with continuity correction method

[4] The unshaded areas indicate the range of dilutions tested for each antimicrobial. Single vertical bars indicate the breakpoints for susceptibility, while double vertical bars indicate the breakpoints for resistance. Numbers in the shaded area indicate the percentages of isolates with MICs greater than the highest tested concentrations. Numbers listed for the lowest tested concentrations represent the percentages of isolates with MICs equal to or less than the lowest tested concentration. CLSI breakpoints were used when available. There are no CLSI breakpoints for streptomycin.