

BACTERIOLOGY PROFICIENCY TESTING PROGRAM

General Category

January 10, 2006

This report summarizes the results of the proficiency test administered January 10, 2006 to laboratories in the General Bacteriology category.

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Bacteriology Proficiency Testing Program

GENERAL INFORMATION

The Bacteriology Proficiency Testing Program. Three proficiency testing events are given annually, each consisting of a minimum of five specimens. In order to successfully complete a test event, participating laboratories must achieve a score of 80% or greater. Unsuccessful performance in the testing program is defined as a score of less than 80% on two of three consecutive test events.

Authentication. The presence and identity of the organism(s) in each specimen must be confirmed by at least 80% of the referee or participating laboratories. Referee laboratories are selected from New York State participating laboratories (located throughout the State) with acceptable and reproducible levels of performance. Sample vials are subjected to extensive quality control testing in our laboratory during preparation and storage.

Grading System. Laboratories are to process proficiency test specimens in the same manner as patient specimens. Thus, laboratories are responsible for identifying test isolates to the same level as performed on patient isolates. If your laboratory speciates an organism on special request, then you must also speciate it in the proficiency test; consider speciation to have been requested on all reportable isolates. In addition, laboratories are not responsible for culturing any test samples from specimen sources which they do not process. Information regarding your laboratory's reporting protocol was provided to us in the questionnaire previously distributed to all laboratories. Any changes in reporting protocol must be received by our office prior to the mailout date for proficiency testing for that information to be considered in grading.

Our testing format is in compliance with HCFA CMS guidelines as specified in the regulations of CLIA '88. One-half of our samples require identification of all organisms present. The other half requires that only the pathogenic organism(s) be reported. We recognize the potential for any organism to be pathogenic depending on the clinical condition of the patient. However, our samples are designed so that only well-established pathogens should be reported.

Tests are graded in strict adherence to HCFA CMS guidelines, as specified in the regulations of CLIA '88. Each of the specimens receives a score as determined by the following formula:

$$(a + b)/(c + d + e) \times 100\%$$

a = # correct identifications

b = # correct antibiotic susceptibility results (if applicable)

c = # possible identifications

d = # possible antibiotic susceptibility results (if applicable)

e = # additional organisms reported

Grades for each sample are then averaged to determine the final grade for this testing event. The minimum passing grade for each test event is 80%.

Disclaimer

The use of brand and/or trade names in this report does not constitute an endorsement of the products on the part of the Wadsworth Center or the New York State Department of Health.

Notes of Interest

Bacteriology Questionnaires

Please make sure that the information on your laboratory's Bacteriology Questionnaire is accurate. If you need a copy of your questionnaire for review, please contact our office at 518-474-4177 or email us at bacti@wadsworth.org. Please note that proficiency test results are graded in accordance with information on the questionnaire. **Recently, there have been several incidences where laboratories have lost credit on proficiency test results because of inaccuracies or outdated information on their Bacteriology Questionnaire. Grades will not be revised due to incorrect information on the questionnaire.**

CLSI guidelines

The following updated standards are available from the Clinical and Laboratory Standards Institute:

- **M100-S16** Performance Standards for Antimicrobial Susceptibility Testing: Sixteenth Informational Supplement. January 2006.
- **M2-A9** Performance Standards for Antimicrobial Disk Susceptibility Tests; Approved Standard – Ninth Edition. January 2006.
- **M7-A7** Methods for Dilution Antimicrobial Susceptibility Tests for Bacteria that Grow Aerobically; Approved Standard – Seventh Edition. January 2006.

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Results of Shiga toxin survey

A survey was included in the last PT mailing requesting information about methodology currently used for the isolation and identification of Shiga toxin-producing *Escherichia coli* O157:H7 (STEC O157:H7). The purpose of the survey was to determine how many laboratories in NYS were utilizing the EIA (enzyme immunoassay) kits to screen for the presence of Shiga toxin in stool specimens. Recently, the CDC published a paper where retrospective analysis of STEC non-O157 isolates demonstrated 6 serogroups which significantly contributed to morbidity: O26, O111, O103, O121, O45 and O145. In addition, serogroup O111 was found to be significantly associated with cases of hemolytic-uremic syndrome (HUS). In light of these findings, a public health response is being constructed to determine the significance of these STEC non-O157 serogroups in diarrheal disease and HUS. Unfortunately, the only way to initially identify STEC non-O157 serogroups as a possible etiology of disease is by using a screen, such as EIA or PCR, to look for the presence of toxin in a stool specimen. We are currently in discussion with the CDC regarding this issue and we hope to have recommendations for clinical laboratories in the near future. Please see a summary of the survey below.

If you have any questions regarding screening of stool specimens for Shiga toxins, please contact Dr. Robyn Atkinson at (518) 474-4177 or bacti@wadsworth.org.

Reference:

Brooks et al. Non-O157 Shiga toxin-producing *Escherichia coli* infections in the United States, 1983-2002. JID 2005; 192: 1422-1429.

Shiga Toxin Survey Results

The following information is based on surveys returned by 196 laboratories. Of these, 166 screen stool specimens for *E. coli* O157 or STEC. The methods used include culture, enzyme immunoassay (EIA, used for shiga toxin testing), or a combination of both. The details are outlined below:

Perform culture for *E. coli* O157 only - (no Shiga toxin testing performed)

Total: 145

- Of these: 78 culture all stools
- 29 culture only on request
- 28 culture bloody stools and others on request
- 8 culture all bloody stools
- 2 gave no info

Perform shiga toxin testing only - (no culture performed)

Total: 9

- Of these: 5 test all stools
- 4 test on request only

Perform culture for *E. coli* O157 and Shiga toxin testing (STT)

Total: 12

- Of these: 3 perform both culture and STT on all stools
- 3 perform both culture and STT only on special request
- 2 culture all stools / STT done only on special request
- 1 cultures all stools / STT done on all bloody stools and others on request
- 1 performs both culture and STT on all bloody stools and others on request
- 1 performs culture on bloody stools only / STT done on all stools
- 1 performs culture on all stools and did not specify indication for STT

JANUARY 10, 2006 TEST EVENT

Number of Participating Laboratories:
Receiving specimens **235**
Returning results **235** **(100%)**

Grade Distribution		
Score	Number	Percent
100	189	80.4
90 - 99	22	9.4
80 - 89	20	8.5
70 - 79	3	1.3
< 70	1	0.4

BACTERIOLOGY - GENERAL
JANUARY 10, 2006
ANSWER KEY

Specimen No. 1 - Stool (Pathogens Only)

Campylobacter jejuni

Specimen No. 2 – Sputum (Pathogens Only)

Enterobacter aerogenes

Specimen No. 3 – Abscess - Aerobic / Anaerobic (All Organisms Reported)

No anaerobic organisms

Beta hemolytic *Streptococcus* group G

Specimen No. 4 – Urine (All Organisms) and Antibiotic Susceptibility

Pseudomonas aeruginosa

Susceptibility of *P. aeruginosa* to: Imipenem - Susceptible
Norfloxacin - Susceptible

Specimen No. 5 – CSF (All Organisms Reported)

Streptococcus pneumoniae

***Chlamydia* Specimen**

Positive for *Chlamydia trachomatis*

Direct Antigen Detection

A (Throat)

Negative for Group A *Streptococcus*

C (Genital)

Negative for Group B *Streptococcus*

REFEREE LABORATORY RESULTS

Specimen Number	Referee Laboratory Responses	Percent*
1	<i>Campylobacter jejuni</i>	100
2	<i>Enterobacter aerogenes</i>	100
3	No anaerobic organisms	100
	Beta hemolytic <i>Streptococcus</i> group G	90
	<i>Streptococcus anginosus</i>	10
4	<i>Pseudomonas aeruginosa</i>	100
5	<i>Streptococcus pneumoniae</i>	100

* Based on responses of 10 referee laboratories

Specimen Number 1 - Stool (Pathogens Only)

This simulated stool sample contained *Campylobacter jejuni*. This organism was reported by all referee laboratories. Among participating laboratories that culture stool samples for *Campylobacter*, 93% successfully isolated the organism. Of these, 75% identified *Campylobacter jejuni* while 25% reported *Campylobacter* species.

Escherichia coli and *Serratia liquefaciens* were included in this specimen as nonpathogenic flora.

Methods of identification used by laboratories reporting:

Campylobacter jejuni:

Conventional biochemicals	142
Two systems	4
Accuprobe	1
Not given	1
TOTAL	148

***Campylobacter* species**

Conventional biochemicals	42
Not given	3
Panbio-Campy (jcl)	2
Campy (jcl) latex	1
Dade Behring MicroScan Gram Neg ID	1
TOTAL	49

Stool cultures not processed 13

No enteric pathogens - Do not culture for *Campylobacter* 11

No enteric pathogens – *Campylobacter* not isolated 10

Campylobacter fetus jejuni

Conventional biochemicals	1
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***Escherichia coli* H7**

Dade Behring MicroScan Gram Neg ID	1
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Positive for *Campylobacter* specific antigen

Remel Prospect Campy EIA	1
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Serratia liquefaciens

Dade Behring MicroScan Gram Neg ID	1
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Additional organisms reported in Specimen 1:

<i>Yersinia enterocolitica</i> group	1
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Specimen No. 2 – Sputum (Pathogens Only)

The pathogenic organism included in this simulated sputum specimen was *Enterobacter aerogenes*. All referee and participating laboratories that process sputum cultures correctly identified this organism.

Enterobacter aerogenes is an important nosocomial pathogen that has been isolated with increasing frequency. Most outbreaks caused by this organism occur in intensive care units. Frequent sites of infection or colonization include the urinary, gastrointestinal or respiratory tracts, with ventilator-associated pneumonia being a common complication. Treatment is often complicated because isolates of *E. aerogenes* are resistant to multiple antibiotics including ampicillin, amoxicillin-clavulanate, extended-spectrum cephalosporins and imipenem.^{1,2} Studies have documented the incidence of extended-spectrum beta-lactamases in 50-58% of isolates of *E. aerogenes* tested.^{3,4}

Streptococcus salivarius and *Staphylococcus hominis* were included as nonpathogenic flora in this specimen.

¹ DeGheldre, Y et al. 1997. Molecular epidemiology of an outbreak of multidrug-resistant *Enterobacter aerogenes* infections and in vivo emergence of imipenem resistance. *Journal of Clinical Microbiology*. 35(1): 152-160.

² Jalaluddin, S. et al. 1998. Molecular epidemiological study of nosocomial *Enterobacter aerogenes* isolates in a Belgian hospital. *Journal of Clinical Microbiology*. 36(7): 1846-1852.

³ Tzelepi, E. et al. 2000. Detection of extended-spectrum β -lactamases in clinical isolates of *Enterobacter cloacae* and *Enterobacter aerogenes*. *Journal of Clinical Microbiology*. 38(2): 542-546.

⁴ DeGheldre, Y. et al. 2001. National epidemiological surveys of *Enterobacter aerogenes* in Belgian hospitals from 1996 to 1998. *Journal of Clinical Microbiology*. 39(3): 889-896.

Methods of identification used by laboratories reporting:

Enterobacter aerogenes

bioMerieux Vitek GNI +	100
Dade Behring MicroScan Gram Neg ID	73
bioMerieux Vitek API 20E	30
Two systems	9
BD BBL Crystal Enteric/Nonfermenter	5
Conventional biochemicals	3
bioMerieux Vitek GNI	2
Dade Behring MicroScan Rapid Gram Neg	2
bioMerieux Vitek 2 GN	1
BD BBL Enterotube II	1
BD Phoenix	1
bioMerieux Vitek GPI	1
TOTAL	228

Sputum specimens not processed 7

Additional organism reported in Specimen 2:

Staphylococcus aureus 1

Specimen No. 3 – Abscess - Aerobic/Anaerobic (All Organisms)

This simulated abscess specimen contained Beta-hemolytic *Streptococcus* group G (*S. anginosus*). No anaerobic organisms were present.

All referee laboratories and 96% of participants who processed this specimen for anaerobic culture did not report the presence of any anaerobic organisms.

Beta hemolytic *Streptococcus* group G was reported by 90% of the referee laboratories while 10% correctly identified the organism to the species level as *Streptococcus anginosus*. Among participating laboratories that processed this sample, approximately 82% reported Beta hemolytic *Streptococcus* group G while 5% identified the isolate as *S. anginosus*.

Approximately 5% of participants do not identify beta hemolytic streptococci other than to rule out group A or group B and reported that this organism as Beta hemolytic *Streptococcus* not A or B.

“*Streptococcus milleri* group” and “*Streptococcus anginosus* group” were reported by 1.7% and 0.8% of participants, respectively. These terms are used interchangeably and refer to small-colony-forming beta hemolytic Streptococci of Lancefield groups A, C, F or G. Three species are currently included in the anginosus group: *S. anginosus*, *S. constellatus* and *S. intermedius*. Both *S. anginosus* and *S. constellatus* may possess Lancefield group A, C, F or G antigens or be non-groupable. *S. intermedius* strains are usually Lancefield group F or non-groupable.

Due to the complex taxonomy of the beta-hemolytic Streptococci, the following responses were considered correct: Beta-hemolytic *Streptococcus* group G, *S. anginosus*, *S. milleri* group or *S. anginosus* group, *S. constellatus* and responses where it is the laboratory’s protocol to only rule out groups A or B.

Members of the *S. anginosus* group are commensals found in the human oral cavity, gastrointestinal and genitourinary tracts. Within this group, *S. anginosus* is the species most commonly found in the gastrointestinal tract. This group of organisms is associated with purulent infections including brain, liver, pelvic and lung abscesses, endocarditis and bacteremia. Many cases of bacteremia have been linked to underlying deep abscesses in visceral organs. There have also been several reports documenting an increase in cases of bacteremia in neutropenic cancer patients caused by viridans streptococci, including those of the *S. anginosus* group.

Ruoff, K.L., Whiley, A, and Beighton D. *Streptococcus*. 2003. pp. 405-421. In P.R. Murray, E.J. Baron, J.H. Jorgensen, M.A. Tenover, R.H. Tenover (eds.) *Manual of Clinical Microbiology*, 8th edition. ASM Press, Washington, DC.

Antony, S.J. and Stratton, C.W. *Streptococcus intermedius* group. 2000. pp. 2183-2189. In G.L. Mandell, J.E. Bennett and R. Dolin (eds.) *Mandell, Douglas, and Bennett’s Principles and Practice of Infectious Diseases*. Churchill Livingstone, Philadelphia.

Reports by participating laboratories:	
No anaerobic organisms	214
Do not perform anaerobic cultures	7
Abscess specimens not processed	4
<i>Propionibacterium acnes</i>	
Remel RapID ANA II	3
bioMerieux Vitek ANI	1
TOTAL	4
<i>Peptostreptococcus prevottii</i>	
Remel RapID ANA II	2
<i>Veillonella</i> species	
Remel RapID ANA II	2
Anaerobic gram positive cocci	1
No Bifidobacterium isolated	1
Methods of identification used by laboratories reporting	
Beta hemolytic <i>Streptococcus</i> group G:	
BD BBL Streptocard	54
Murex Streptex	51
DPC PathoDx Strep Grouping	34
Two systems	20
Boule Diagnostics Phadebact <i>Streptococcus</i>	8
Conventional biochemicals	5
Hardy Diagnostics StrepPro Grouping kit	5
bioMerieux Vitek Slidex Strepto	3
Remel BactiCard Strep	2
The Binding Site Strep Grouping kit	2
PathoDx Strep Grouping Kit	2
Oxoid Streptococcal Grouping Kit	1
Not given	1
bioMerieux Vitek GPI	1
TOTAL	189
Beta hemolytic <i>Streptococcus</i> not group A or B	
Conventional biochemicals	5
Dade Behring MicroScan Gram Positive ID	2
DPC PathoDx Strep Grouping	2
BD BBL Streptocard	1
The Binding Site Strep Grouping kit	1
Two or more methods	1
TOTAL	12

<i>Streptococcus anginosus</i>	
Remel RapID STR	4
Two systems	2
bioMerieux API Rapid ID 32 Strep	1
Conventional biochemicals	1
bioMerieux Vitek GPI	1
Remel RapID ANA II	1
bioMerieux Vitek API 20 Strep	1
TOTAL	11
<i>Streptococcus milleri</i> group	
Two or more methods	2
BD BBL Crystal Gram Positive	1
Dade Behring MicroScan Gram Positive ID	1
TOTAL	4
Abscess specimens not processed	4
<i>Streptococcus anginosus</i> group	
Conventional biochemicals	1
Murex Streptex	1
TOAL	2
<i>Streptococcus constellatus</i>	
Remel RapID STR	1
Remel RapID ANA II	1
TOTAL	2
Beta hemolytic <i>Streptococcus</i> group F	
BD BBL Streptocard	1
Two or more methods	1
TOTAL	2
Beta hemolytic <i>Streptococcus</i> not group A	
Test method not indicated	1
Beta hemolytic <i>Streptococcus</i> not group A, B or D	
Conventional biochemicals	1
Group D not <i>Enterococcus</i>	
Conventional biochemicals	1
No report	1
<i>Streptococcus agalactiae</i>	
Murex Streptex	1
<i>Streptococcus milleri / anginosus</i> group	
Conventional biochemicals	1

<i>Streptococcus sanguis</i> (group G)	
Two or more test methods	1
<i>Streptococcus</i>, group C	
Remel RapID STR	1
<i>Streptococcus</i>, group D	
Conventional biochemicals	1
Additional organisms reported in Specimen 3:	
<i>Pseudomonas aeruginosa</i>	2
<i>Acinetobacter baumannii</i> / <i>haemolyticus</i>	1
<i>Serratia liquefaciens</i>	1
<i>Staphylococcus</i> , coagulase-negative	1
<i>Streptococcus milleri</i>	1

Specimen No. 4 –Urine (All Organisms) and Antibiotic Susceptibility

This simulated urine specimen contained *Pseudomonas aeruginosa*. All referee laboratories and participants that process urine cultures correctly identified this organism.

Antimicrobial susceptibility testing was indicated for this specimen using imipenem and norfloxacin. This isolate was susceptible to both imipenem and norfloxacin and was reported as such by all referee and participating laboratories that perform susceptibility testing with these antibiotics.

Methods of identification used by laboratories reporting:

Pseudomonas aeruginosa

bioMerieux Vitek GNI +	95
Dade Behring MicroScan Gram Neg ID	76
bioMerieux Vitek API 20E	20
Two or more test methods	12
Conventional biochemicals	9
BD BBL Crystal Enteric/Nonfermenter	6
bioMerieux Vitek API 20NE	6
BD Phoenix	1
BD BBL Streptocard	1
BD BBL Oxi-Ferm II	1
bioMerieux Vitek GPI	1
bioMerieux Vitek GNI	1
bioMerieux Vitek 2 GN	1
bioMerieux Vitek RAPIDEC Staph	1
Dade Behring MicroScan Rapid Gram Neg	1
Remel RapID NF Plus	1
Test method not indicated	1
TOTAL	234

Urine cultures not processed **1**

Results of Antimicrobial Susceptibility Testing – *P. aeruginosa* with Imipenem

Result	Method	MIC - µg/ml	Zone - mm	
Susceptible (200)	bioMerieux Vitek (81)	≤ 0.5 (1)		
		< 1 (1)		
		≤ 1 (14)		
		2 (8)		
		< 4 (5)		
		≤ 4 (50)		
		4 (1)		
		Not indicated (1)		
	Dade Behring MicroScan (71)	≤ 1 (4)		
		≤ 4 (44)		
		< 4 (17)		
		4 (1)		
		< 14 (1)		
		Not indicated (4)		
	Disk diffusion (38)			19 (3)
				20 (5)
				21 (6)
				22 (4)
				23 (9)
				24 (5)
				25 (2)
				26 (2)
				28 (1)
				29 (1)
	Test method not indicated (2)	≤ 4 (1)		
		Not indicated (1)		
	AB Biodisk E-test (2)	1.5 (1)		
4.0 (1)				
Broth microdilution (1)	≤ 0.5 (1)			
In house frozen panels (1)	1 (1)			
Agar dilution (1)	≤ 4 (1)			
Trek Sensititre (1)	≤ 2 (1)			
Trek broth microdilution (1)	1 (1)			
Two methods (1)	≤ 4 (1)			
Imipenem not tested (34)				
Urine cultures not performed (1)				

Number of laboratories reporting each result indicated in ()

Results of Antimicrobial Susceptibility Testing – *P. aeruginosa* with Norfloxacin

Result	Method	MIC (µg/ml)	Zone (mm)	
Susceptible (58)	Dade Behring MicroScan (27)	≤ 4 (19)		
		< 4 (6)		
		Not indicated (2)		
	Disk diffusion (22)			20 (1)
				21 (1)
				22 (2)
				23 (1)
				24 (2)
				25 (5)
				26 (5)
				28 (1)
				29 (2)
				30 (1)
		31 (1)		
	bioMerieux Vitek (5)		≤ 0.5 (1)	
			1 (1)	
			2 (1)	
≤ 4 (2)				
Test method not indicated (2)		≤ 4 (1)		
		Not indicated (1)		
In house frozen panels (1)		1 (1)		
Trek broth microdilution (1)		0.5 (1)		
Norfloxacin not tested (176)				
Urine cultures not performed (1)				

Number of laboratories reporting each result indicated in ()

Antibiotic Susceptibility Results - Participating & Referee Labs <i>Pseudomonas aeruginosa</i>				
	Imipenem		Norfloxacin	
	Referee ^a	Participant ^b	Referee ^a	Participant ^b
Susceptible	10	190	4	54
Intermediate	0	0	0	0
Resistant	0	0	0	0
Not Tested ^c	0	34	6	170
Do not process source ^d	0	1	0	1
No result reported	0	0	0	0
Not performed on organism ^e	0	0	0	0
Not performed on source ^f	0	0	0	0
No susceptibility testing done ^g	0	0	0	0

^aReferee Laboratories (10 labs total)

^bOther Participating Laboratories (225 labs total)

^cAntibiotic not tested / reported for this organism

^dDo not process specimen source

^eDo not perform antimicrobial susceptibility testing on this organism

^fDo not perform susceptibility testing on specimen source

^gNo antimicrobial susceptibility testing performed

Specimen No. 5 – CSF (All Organisms)

This simulated cerebrospinal fluid contained *Streptococcus pneumoniae*. All referee laboratories correctly identified this organism as did 98% of participating laboratories that process CSF cultures.

Methods of identification used by participating laboratories reporting:

Streptococcus pneumoniae

Conventional biochemicals	130
Two or more test methods	36
BioMerieux Vitek GPI	24
BD BBL Pneumoslide	8
Dade Behring MicroScan	7
BioMerieux Vitek API 20 Strep	5
Remel RapID STR	4
Boule Diagnostics Phadebact <i>Streptococcus</i>	3
BD BBL Crystal Gram Positive	1
TOTAL	218

CSF cultures not processed 14

Alpha-hemolytic *Streptococcus* 2

No growth 1

Additional organisms reported in Specimen 5:

<i>Streptococcus oralis</i>	2
<i>Neisseria lactamica</i>	1
<i>Streptococcus viridans</i>	1

Chlamydia – cervical swab for direct testing

This simulated cervical swab was provided to laboratories that test for *Chlamydia* using direct detection methods. However, this sample contains non-viable organisms and is not suitable for laboratories performing *Chlamydia* culture.

This sample was positive for *Chlamydia* and was reported as such by 98% of the participating laboratories that tested this specimen.

Test kits used by laboratories reporting this specimen as:

Positive for *Chlamydia trachomatis*

Gen-Probe PACE 2 CT OR CT/GC	53
Roche Diagnostics COBAS Amplicor CT/NG	14
BD ProbeTec <i>C. trachomatis</i> assay	14
Gen-Probe Aptima Combo 2	12
bioMerieux Vitek VIDAS	7
Roche Diagnostics Amplicor CT/NG	4
Beckman Coulter Access Chlamydia EIA	2
BioRad Pathfinder <i>Chlamydia</i> EIA	2
Test method not indicated	2
Trinity Biotech <i>C. trachomatis</i> direct test	1
Thermo Biostar Chlamydia OIA	1
Real-time PCR	1
TOTAL	113

Negative for *Chlamydia trachomatis*

BD ProbeTec <i>C. trachomatis</i> assay	2
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No report	2
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Direct Antigen Detection

All participating laboratories which perform direct antigen testing received either a simulated throat swab to be tested for Group A *Streptococcus* or a genital swab to be tested for Group B *Streptococcus*. Information provided in the Bacteriology Questionnaire was used to determine which type of specimen to send to each laboratory.

Specimen A - Source: Throat for Group A *Streptococcus*

This specimen was negative for Group A *Streptococcus*. All of the participating laboratories that processed this specimen reported it as negative.

Test kits used by laboratories reporting Specimen A as:

Positive for Group A *Streptococcus*:

Thermo BioStar Acceava Strep A	13
BD Q Test Strep	12
Abbott Signify Strep A	9
Quidel QuickVue + Strep A	7
Fisher Healthcare Sure-Vue Strep A	6
Genzyme OSOM Ultra Strep A	6
Thermo BioStar Strep A OIA Max	5
BD Directigen EZ Strep	4
Cardinal Health SP Brand Rapid Strep A	4
Quidel QuickVue Inline Strep A	4
Test method not indicated	4
Remel RIM A.R.C. Strep A	3
BD Link 2 Strep A	2
Gen-Probe Group A Strep	2
LifeSign Status Accustrep A	2
Meridian Diagnostics ImmunoCard Stat Strep A	2
Remel PathoDx Strep A	2
Applied Biotech SureStep Strep A	1
B-D Check Strep A	1
Beckman-Coulter Icon DS Strep A	1
Beckman-Coulter Icon Sc Strep A	1
Polymedco Poly Stat Strep A	1
Sacks Medical Corp RefuAH Strep A	1
TOTAL	93

Specimen C – Source: Genital for Group B *Streptococcus*

This specimen was negative for Group B *Streptococcus*. All laboratories that tested this sample reported it as positive.

Test kits used by laboratories reporting Specimen C as:

Positive for Group B *Streptococcus*

BioStar Strep B OIA

2

BACTERIAL IDENTIFICATION BY PARTICIPATING LABORATORIES

	<u>Number Reported</u>	<u>%</u>
SPECIMEN NUMBER 1		
<i>Campylobacter jejuni</i>	148	63.0
<i>Campylobacter</i> species	49	20.9
Stool cultures not processed	13	5.5
No enteric pathogens – do not culture for <i>Campylobacter</i>	11	4.7
No enteric pathogens – <i>Campylobacter</i> not isolated	10	4.3
<i>Campylobacter fetus jejuni</i>	1	0.4
<i>Escherichia coli</i> H7	1	0.4
Positive for <i>Campylobacter</i> specific antigen	1	0.4
<i>Serratia liquefaciens</i>	1	0.4

SPECIMEN NUMBER 2		
<i>Enterobacter aerogenes</i>	228	97.0
Sputum specimens not processed	7	3.0

SPECIMEN NUMBER 3		
No anaerobic organisms	214	91.1
Do not perform anaerobic cultures	7	3.0
Abscess specimens not processed	4	1.7
<i>Propionibacterium acnes</i>	4	1.7
<i>Peptostreptococcus prevottii</i>	2	0.9
<i>Veillonella</i> species	2	0.9
Anaerobic gram positive cocci	1	0.4
No <i>Bifidobacterium</i> isolated	1	0.4
Beta hemolytic <i>Streptococcus</i> group G	189	80.4
Beta hemolytic <i>Streptococcus</i> not group A or B	12	5.1
<i>Streptococcus anginosus</i>	11	4.7
<i>Streptococcus milleri</i> group	4	1.7
Abscess specimens not processed	4	1.7
<i>Streptococcus anginosus</i> group	2	0.9
<i>Streptococcus constellatus</i>	2	0.9
Beta hemolytic <i>Streptococcus</i> group F	2	0.9
Beta hemolytic <i>Streptococcus</i> not group A	1	0.4
Beta hemolytic <i>Streptococcus</i> not group A, B or D	1	0.4
No report	1	0.4
Group D not <i>Enterococcus</i>	1	0.4
<i>Streptococcus agalactiae</i>	1	0.4
<i>Streptococcus milleri</i> / <i>anginosus</i> group	1	0.4
<i>Streptococcus sanguis</i> (group G)	1	0.4
<i>Streptococcus</i> , group C	1	0.4
<i>Streptococcus</i> , group D	1	0.4

SPECIMEN NUMBER 4

<i>Pseudomonas aeruginosa</i>	234	99.6
Urine cultures not processed	1	0.4

SPECIMEN NUMBER 5

<i>Streptococcus pneumoniae</i>	218	92.8
CSF cultures not processed	14	6.0
Alpha-hemolytic <i>Streptococcus</i>	2	0.9
No growth	1	0.4

CHLAMYDIA SPECIMEN

Positive for <i>Chlamydia trachomatis</i>	113	96.6
Negative for <i>Chlamydia trachomatis</i>	2	1.7
No report	2	1.7

DIRECT ANTIGEN SPECIMEN

A. Negative for Group A <i>Streptococcus</i>	93	100.0
C. Negative for Group B <i>Streptococcus</i>	2	100.0