BACTERIOLOGY PROFICIENCY TESTING PROGRAM

Comprehensive Category

September 6, 2016

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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.

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 Center for Medicare & Medicaid Services 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 adherence to 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.

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

Proficiency Testing Participation
Beginning January 1, 2017 New York State will no longer offer proficiency testing (PT). Laboratories holding NYS laboratory permits must enroll in an approved proficiency testing module provided by a CLIA-approved PT provider.

Reminder
Proficiency test samples must be handled just like patient samples, to the extent possible. If you perform testing using one system on patient samples DO NOT use additional systems on proficiency samples. Several laboratories are reporting the use of multiple systems/methods to identify organisms or perform susceptibility tests. Unless you are using multiple systems on patient samples you must not do so on proficiency samples.

Clinical Laboratory Standards Institute
Please review the new CLSI recommendations to optimize detection and reporting of antimicrobial resistance. The latest guidelines were published in January 2016.

Samples for Remediation
We maintain a limited number of samples for remediation purposes. If your laboratory had difficulty isolating or identifying the organisms in a sample you can contact us after the event for additional samples. Contact us either by email or phone and provide your PFI number and the sample(s) needed. They will be shipped to you within a week.

New email address
The Bacteriology proficiency testing program has a new email address – BactiPTP@health.ny.gov

September 2016 Test Event

Number of Participating Laboratories: 76

Grade Distribution		
Score	**Number**	**Percent**
100%	55	72
90 – 99%	7	9
80 – 89%	12	16
<80%	2	3

BACTERIOLOGY - COMPREHENSIVE
September 6, 2016

ANSWER KEY

Specimen Number 1 - Stool (Pathogens only)
No enteric pathogens

Specimen Number 2 – Tracheal aspirate (Pathogens only)
Moraxella (*Branhamella*) *catarrhalis*

Specimen Number 3 – Intra-abdominal abscess - Aerobic / Anaerobic (All organisms)
Bacteroides fragilis (*B. fragilis* group also accepted)

Specimen Number 4 –Blood (All organisms) and Antibiotic Susceptibility
Enterococcus faecalis
Susceptibility to: Penicillin – susceptible
Vancomycin – resistant

Specimen Number 5 – Wound (Pathogens only)
Corynebacterium jeikeium (*Corynebacterium* species also accepted)

***Chlamydia* Direct Detection – Urine/Cervix**
Positive for *Chlamydia trachomatis*

Group A *Streptococcus* Direct Antigen Detection - Throat
Negative for Group A *Streptococcus*

Specimen Number 1 - Stool (Pathogens Only)

Accepted response – No enteric pathogens
Organisms included: Morganella morganii, *Escherichia coli, Staphylococcus epidermidis*

100% of the participating laboratories reported correctly.

Results reported for specimen # 1

Result	Method	# Labs
No enteric pathogens isolated		67
Specimen source not tested		9

Specimen Number 2 – Tracheal aspirate (Pathogens only)

Accepted response – *Moraxella* (*Branhamella*) *catarrhalis*
Other organism included: *Streptococcus salivarius*

93% of participating laboratories reported *Moraxella* (*Branhamella*) *catarrhalis.*

Results reported for specimen # 2

Result	**Method**	**# Labs**
Moraxella (Branhamella) catarrhalis	Remel RapID NH	17
	Siemens (Dade Behring) MicroScan HNID	13
	bioMerieux API NH	12
	bioMerieux Vitek 2 NH	11
	Conventional biochemicals	6
	Remel Catarrhalis Disk	2
	Remel BactiCard Neisseria	2
	Bio Merieux Vitek MS	2
	bioMerieux Vitek MS Plus	1
	bioMerieux Vitek 2 GP	1
Moraxella species	Siemens (Dade Behring) Negative Combo - any panel	1
Neisseria species	bioMerieux Vitek 2 NH	1
Neisseria meningitidis	Remel RapID NH	2
No pathogens isolated		1
Specimen source not tested		4

Specimen Number 3 – Intra-abdominal abscess - Aerobic/Anaerobic (All organisms)

Accepted response – *Bacteroides fragilis* (*Bacteroides fragilis* group also accepted)

85% of the participating laboratories reported *Bacteroides fragilis* or *Bacteroides fragilis* group.

Results reported for specimen # 3

Result	Method	# Labs
Bacteroides fragilis	Remel RapID ANA II	30
	bioMerieux Vitek 2 ANC	10
	Siemens (Dade Behring) MicroScan Rapid Anaerobe	8
	bioMerieux API 20A	7
	Bio Merieux Vitek MS	3
	bioMerieux Vitek MS Plus	1
Bacteroides fragilis group	Conventional biochemicals	1
	bioMerieux API 20A	1
Bacteroides species	bioMerieux Vitek 2 ANC	1
	bioMerieux API 20A	1
	Remel RapID ANA II	1
	Siemens (Dade Behring) MicroScan Rapid Anaerobe	1
Prevotella species	Remel RapID ANA II	4
Bacteroides thetaiotaomicron	Siemens (Dade Behring) MicroScan Rapid Anaerobe	1
No aerobic organisms		2
Specimen source not tested		4

Additional organisms reported		
Staphylococcus epidermidis	bioMerieux Vitek 2 GP	1
Staphylococcus haemolyticus	Siemens (Dade Behring) Positive Combo - any panel	1

Specimen Number 4 – Blood (All organisms) and Antibiotic susceptibility

Accepted response – *Enterococcus faecalis*
Penicillin – susceptible
Vancomycin – resistant

93% of the participating laboratories reported *Enterococcus faecalis.*

Results reported for specimen # 4

Result	**Method**	**# Labs**
Enterococcus faecalis	Siemens (Dade Behring) Positive Combo - any panel	32
	bioMerieux Vitek 2 GP	25
	bioMerieux API 20 Strep	4
	Bio Merieux Vitek MS	2
	bioMerieux Vitek MS Plus	1
	Conventional biochemicals	1
	BD Phoenix Gram Positive ID	1
Enterococcus faecium	bioMerieux API 20 Strep	1
	Conventional biochemicals	2
Enterococcus species	Conventional biochemicals	2
Specimen source not tested		5

Susceptibility testing results

Penicillin				
Result	**Method**	**# Labs**	**Zone Size**	**MIC**
Susceptible	MicroScan	30		2
		1		=0.5
	bioMerieux Vitek 2	14		=2
		5		4
		1		<=2
		1		Not given
	E-test	1		=4
	Not given	1		=2
	Disk diffusion	3	19	
		2	20	
		1	17	
		1	15	
Resistant	Disk diffusion	1	12	
		1	11	
No Interpretation	BD Phoenix	1		
Test not performed		12		
Vancomycin				
Result	**Method**	**# Labs**	**Zone Size**	**MIC**
Resistant	MicroScan	31		>16
		1		>=16
	bioMerieux Vitek 2	24		>=32
		1		Not given
	Disk diffusion	3	6	
	E-test	1		>256
	BD Phoenix	1		>16
	Not given	1		>16
	Not given	1	10	>=32
	Disk diffusion	2	0	
		1	11	
		1	10	
		1	2	
Test not performed		7		

Specimen Number 5 – Wound (Pathogens only)

Accepted response – *Corynebacterium jeikeium* (*Corynebacterium* species also accepted)

93 % of participating laboratories reported *Corynebacterium jeikeium* or *Corynebacterium* species.

Results reported for specimen # 5

Result	Method	# Labs
Corynebacterium jeikeium	Remel RapID CB Plus	15
	bioMerieux API Coryne	13
	bioMerieux Vitek 2 ANC	9
	Conventional biochemicals	6
	Bio Merieux Vitek MS	2
	bioMerieux Vitek MS Plus	1
Corynebacterium species	Conventional biochemicals	17
	bioMerieux API Coryne	1
	Other - Gram Stain - Morphology	1
	bioMerieux Vitek 2 GP	1
	bioMerieux Vitek 2 ANC	1
Gram positive bacillus		1
Micrococcus species	Siemens (Dade Behring) Positive Combo - any panel	2
No pathogens isolated		4
Specimen source not tested		2

Chlamydia – Urine/cervical swab for Direct Detection Methods

This sample could be tested as a urine or a cervical swab in transport media. It was provided to laboratories that test for *Chlamydia* using molecular detection methods. This sample was not suitable for laboratories performing antigen detection for *Chlamydia* or *Chlamydia* culture.

This sample was positive for *Chlamydia trachomatis* and was reported as such by 100% of the participating laboratories that tested this specimen.

Test kits used by laboratories processing this specimen

Method	**# Labs**
Gen-Probe Aptima Combo 2	12
Cepheid Xpert CT/NG	10
BD ProbeTec ET CT or CT/GC	7
Abbott RealTime CT/NG assay	1
Roche Diagnostics COBAS AMPLICOR CT/NG	1
BD Viper System	1

Group A Streptococcus – Throat Swab for Direct Detection Methods

This simulated throat swab was provided to all laboratories that process specimens for Group A *Streptococcus* using direct detection techniques.

This specimen was reported as negative for Group A *Streptococcus* by 100% of the participating laboratories that processed it.

Test kits used by laboratories processing this specimen

Method	**# Labs**
Sekisui (Genzyme) OSOM Ultra Strep A	9
BD Chek Group A Strep	7
Cardinal Health SP Brand Strep A Dipstick	7
Acceava Strep A	6
BD Directigen EZ Strep A	3
Fisher Sure-Vue Strep A Lateral Flow Test	3
Clearview Exact Strep A Dipstick	3
Meridian Bioscience ImmunoCard STAT Strep A	2
Fisher Sure-Vue Signature Strep A Test	2
Signify Strep A Dipstick	2
AlereBinaxNow Strep A Card	1
BD Veritor System For Rapid Detection of Group A Strep	1
Beckman Coulter Icon SC Strep A	1
Quidel QuickVue + Strep A	1
Sekisui (Genzyme) OSOM Strep A Test	1
Stanbio QuStick Strep A Rapid Strip Test	1
Beckman Coulter Icon DS Strep A	1

BACTERIAL IDENTIFICATION BY PARTICIPATING LABORATORIES

Sample/Report	**# Labs**	**%**
SPECIMEN NUMBER 1 (Stool)		
No enteric pathogens	67	100
Specimen source not tested	9	
SPECIMEN NUMBER 2 (Tracheal aspirate)		
Moraxella (*Branhamella*) *catarrhalis*	67	93
Moraxella species	1	1
Neisseria species	1	1
Neisseria meningitidis	2	3
No pathogens isolated	1	1
Specimen source not tested	4	
SPECIMEN NUMBER 3 (Intra-abdominal abscess)		
Bacteroides fragilis	59	82
Bacteroides fragilis group	2	3
Bacteroides species	4	6
Prevotella species	4	6
Bacteroides thetaiotaomicron	1	1
No aerobic organisms	2	3
Specimen source not tested	4	
SPECIMEN NUMBER 4 (Blood)		
Enterococcus faecalis	66	93
Enterococcus faecium	3	4
Enterococcus species	2	4
Specimen source not tested	5	
SPECIMEN NUMBER 5 (Wound)		
Corynebacterium jeikeium	46	62
Corynebacterium species	21	28
Gram positive bacillus	1	1
Micrococcus species	2	3
No pathogens isolated	4	5
Specimen source not tested	2	

***CHLAMYDIA* – DIRECT DETECTION (Urine/cervical swab)**		
Result	**# Labs**	**%**
Positive for *Chlamydia trachomatis*	32	100
GROUP A *STREPTOCOCCUS* - DIRECT DETECTION (Throat)		
Negative for Group A *Streptococcus*	51	100