

BACTERIOLOGY PROFICIENCY TESTING PROGRAM

Comprehensive Category

April 27, 2015

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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

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.

A few laboratories are reporting both an MIC and a zone diameter for susceptibility results. Unless you are testing patient isolates using both a disk diffusion AND MIC method do not test proficiency samples using both methods.

Online Instructions and Worksheets

The instructions and worksheets for Bacteriology proficiency testing are available at the New York State Department of Health, Wadsworth Center website at <http://www.wadsworth.org/divisions/infdis/bacti/worksheets.htm>. Please bookmark this site to easily find the directions for the mailouts.

Contact information

Please make sure that CLEP has the correct email addresses for your laboratory contact people. On occasion we need to notify you of an issue with a sample and this is done by email.

Bacteriology Questionnaires

Please update your questionnaire whenever there is a change in your laboratory's reporting policy. Proficiency test results are graded in accordance with information on the questionnaire so be certain that this information is accurate. If your questionnaire indicates that your laboratory reports an organism to the species level then you must report to the species level on the proficiency test to receive credit. 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. **Grades will not be revised due to incorrect information on the questionnaire.**

EPTRS Reporting Tips

When entering results into EPTRS if you can't find what you want in the drop down list you can select "other" and a text box appears for you to type in your response. Make sure you have pop-ups enabled in your browser.

NYS Reportable Disease List

The New York State Reportable Disease List can be found at: <http://www.wadsworth.org/labcert/regaffairs/clinical/commdiseaseguide.pdf>

Clinical Laboratory Standards Institute

Labs performing antimicrobial susceptibility testing should be using the latest "CLSI Performance Standards for Antimicrobial Susceptibility Testing" document.

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

April 27, 2015 Test Event

Number of Participating Laboratories: 186
Did not return results: 2

Grade Distribution		
Score	Number	Percent
100%	124	67
90 – 99%	4	2
80 – 89%	45	24
<80%	11	6

BACTERIOLOGY - COMPREHENSIVE

April 27, 2015

ANSWER KEY

Specimen Number 1 - Stool (Pathogens only)

Salmonella species (serogroup G)

Specimen Number 2 – CSF (All organisms)

Haemophilus parainfluenzae

Specimen Number 3 – Abscess - Aerobic / Anaerobic (All organisms)

Finnegoldia magna

Staphylococcus aureus

Specimen Number 4 - Urine (Pathogens only) and Antibiotic Susceptibility

Escherichia coli

Susceptibility to: Cefazolin – susceptible

Norfloxacin – susceptible

Specimen Number 5 – Sputum (Pathogens only)

Moraxella catarrhalis

***Chlamydia* Direct Detection – Urine/Cervix**

Negative for *Chlamydia trachomatis*

Group A *Streptococcus* Direct Antigen Detection - Throat

Positive for Group A *Streptococcus*

Specimen Number 1 - Stool (Pathogens Only)

Correct response – *Salmonella* species, *Salmonella* serogroup G

Other organisms included: *Escherichia coli*, *Morganella morganii*

Results reported for specimen # 1

Result	Method	# Labs
<i>Salmonella</i> species	bioMerieux Vitek 2 GN	45
	Siemens (Dade Behring) Negative Combo - any panel	26
	bioMerieux API 20E	13
	MALDI-TOF Mass Spectrometry	3
	Serotyping	2
	BD BBL Samonella polyvalent	2
	bioMerieux Vitek MS (MALDI TOF)	2
	Remel MicroID	1
	BD Phoenix Gram Negative ID	1
	BD BBL Crystal Enteric/Nonfermenter	1
	Wellcolex (REMEL): Serotype E or G	1
	bioMerieux API Rapid 20E	1
	Remel Wellcolex Colour Salmonella	1
	<i>Salmonella</i> species, not typhi	Siemens (Dade Behring) Negative Combo - any panel
bioMerieux Vitek 2 GN		4
bioMerieux API 20E		3
bioMerieux Vitek MS (MALDI TOF)		1
Siemens Negative Combo (any panel)		1
Conventional biochemicals		1
<i>Salmonella</i> serogroup G	bioMerieux Vitek 2 GN	2
	bioMerieux API 20E	1
	BD Salmonella Serotyping	1
	Two or more systems	1
	BD Phoenix Gram Negative ID	1
<i>Salmonella</i> serogroup E	bioMerieux Vitek 2 GN	2
<i>Salmonella</i> species, Group E or G	Siemens (Dade Behring) Negative Combo - any panel	2
	BD Phoenix Gram Negative ID	1
	bioMerieux Vitek 2 GN	1
	Siemens (Dade Behring) Negative Combo - any panel	1
	Remel Wellcolex Salmonella	1
	bioMerieux Vitek 2 GN	1
	MALDI-TOF Mass Spectrometry	1
	bioMerieux Vitek 2 GN	1
<i>Salmonella</i> serogroup B	Siemens (Dade Behring) Negative Combo - any panel	1
<i>Salmonella</i> serogroup C1	bioMerieux Vitek 2 GN	1
<i>Proteus vulgaris</i>	Remel RapID ONE	1
No pathogens isolated		32
Culture Negative for <i>Yersinia enterocolitica</i>		1
Specimen source not tested		17

Additional organisms reported		
<i>Escherichia coli</i>	bioMerieux Vitek 2 GN	1
	MALDI-TOF Mass Spectrometry	1
	Conventional biochemicals	1
<i>Morganella morganii</i>	bioMerieux Vitek 2 GN	1
	MALDI-TOF Mass Spectrometry	1

Specimen Number 2 – CSF (All organisms)

Correct response –*Haemophilus parainfluenzae*

Results reported for specimen # 2

Result	Method	# Labs
<i>Haemophilus parainfluenzae</i>	Remel RapID NH	44
	bioMerieux Vitek 2 NH	26
	Siemens (Dade Behring) MicroScan HNID	19
	Conventional biochemicals	16
	bioMerieux API NH	15
	BD BBL Haemophilus ID Quad	6
	MALDI-TOF Mass Spectrometry	4
	bioMerieux Vitek MS (MALDI-TOF)	3
	16s rDNA sequencing	2
	16S rRNA Sequencing	1
	Not given	1
	<i>Haemophilus</i> species	Conventional biochemicals
<i>Haemophilus influenzae</i>	Remel Rapid NH	11
	bioMerieux Vitek 2 NH	7
	Siemens (Dade Behring) MicroScan HNID	3
	bioMerieux API NH	2
	bioMerieux Vitek 2 GN	1
<i>Haemophilus parahaemolyticus</i>	Conventional biochemicals	1
Specimen source not tested		20

Specimen Number 3 – Abscess - Aerobic/Anaerobic (All organisms)

Correct response - *Fingoldia magna*
Staphylococcus aureus

Results reported for specimen # 3

Result	Method	# Labs
Anaerobic organism		
<i>Fingoldia magna</i>	Remel RapID ANA II	27
	bioMerieux Vitek 2 ANC	22
	bioMerieux Vitek MS (MALDI TOF)	6
	MALDI-TOF Mass Spectrometry	3
	bioMerieux API 20A	2
	16s rDNA sequencing	2
	Conventional biochemicals	1
	bioMerieux Vitek 1 ANI	1
	Not given	1
<i>Peptostreptococcus magnus</i>	Remel RapID ANA II	41
	Siemens (Dade Behring) MicroScan Rapid Anaerobe	13
	bioMerieux Vitek 2 ANC	12
	bioMerieux Vitek MS (MALDI TOF)	1
	bioMerieux API Rapid ID 32A	1
	MALDI-TOF Mass Spectrometry	1
	bioMerieux API 20A	1
<i>Peptostreptococcus species</i>	Remel RapID ANA II	8
	bioMerieux API 20A	6
	Conventional biochemicals	4
	bioMerieux Vitek 2 ANC	2
	BD BBL Crystal Anaerobe	1
	Siemens (Dade Behring) MicroScan Rapid Anaerobe	1
Anaerobic gram positive cocci	Conventional biochemicals	9
<i>Peptostreptococcus prevotii</i>	Remel RapID ANA II	1
No anaerobic organisms		2
Anaerobe not tested for the source		1
No Bifidobacter sp. isolated		2
Specimen source not tested		2
No anaerobic organism reported/Do not culture anaerobes		10
Aerobic organism		
<i>Staphylococcus aureus</i>	Siemens (Dade Behring) Positive Combo - any panel	53
	bioMerieux Vitek 2 GP	43
	Conventional biochemicals	28
	Remel Staphaurex	24
	Remel BactiStaph	6
	BD BBL Staphyloslide	5
	bioMerieux Vitek MS (MALDI TOF)	4
	Fisher Healthcare SureVue Color Staph	3
	BD Phoenix Gram Positive ID	3
	Pro-Lab Diagnostics Prolex Staph latex	3

	MALDI-TOF Mass Spectrometry	3
	Not given	1
	bioMerieux Vitek Slidex Staph	1
	Hardy Staphlex Kit	1
	Polymerase chain reaction	1
	Remel RapID ANA II	1
	bioMerieux Vitek 1 GPI	1
	bioMerieux API Staph	1
	Specimen source not tested	2

Specimen Number 4 - Urine (Pathogens only) and Antibiotic susceptibility

Correct response – *Escherichia coli*
Cefazolin – susceptible
Norfloxacin – susceptible

Results reported for specimen # 4

Result	Method	# Labs
<i>Escherichia coli</i>	bioMerieux Vitek 2 GN	75
	Siemens (Dade Behring) Negative Combo - any panel	62
	Conventional biochemicals	17
	bioMerieux API 20E	10
	BD Phoenix Gram Negative ID	6
	bioMerieux API Rapid 20E	3
	BD BBL Crystal Enteric/Nonfermenter	2
	bioMerieux Vitek MS (MALDI-TOF)	5
	MALDI-TOF Mass Spectrometry	2
	Remel RapID ONE	1
	Not given	1

Susceptibility testing results

Cefazolin				
Result	Method	# Labs	Zone	MIC
Susceptible	BD Phoenix	6		<=2
		1		<=1
	bioMerieux Vitek 2	2		<4
		2		Not given
		5		<=4.0
		1		<=2
		1		<=2
	MicroScan	5		<8
		5		<=2
		2		<=8.0
		1		Not given
		1		<2
		1		<4
	Agar dilution	1		<=2
	In house prepared frozen MIC	1		=2
	Trek Sensititre	1		<=2
		1		=2
	Not given	2		<=8
	Not given	1		<=4
	Disk diffusion	6	23	
		3	25	
		3	26	
		3	24	
		1	22	
		1	20	
		1	25	
		1	30	
Intermediate	bioMerieux Vitek 2	1		<=4
	Disk diffusion	1	21	
No Interpretation	bioMerieux Vitek 2	1		<=4
Test not performed on organism		4		
Norfloxacin				
Result	Method	# Labs	Zone	MIC
Susceptible	bioMerieux Vitek 2	9		<=0.5
	MicroScan	1		<=4
	Not given	1		<=4
	Disk diffusion	2	35	
		1	34	
		1	32	
		1	33	
		1	30	
	1	26		
	1	28		
No Interpretation		1		
Test not performed		161		

Specimen Number 5 – Sputum (Pathogens only)

Correct response – *Moraxella catarrhalis*

Additional organism included – *Streptococcus bovis*

Results reported for specimen # 5

Result	Method	# Labs
<i>Moraxella (Branhamella) catarrhalis</i>	Remel RapID NH	56
	bioMerieux Vitek 2 NH	37
	Conventional biochemicals	27
	Siemens (Dade Behring) MicroScan HNID	20
	bioMerieux API NH	19
	bioMerieux Vitek 2 GP	1
	bioMerieux Vitek MS (MALDI-TOF)	8
Alpha-hemolytic <i>Streptococcus</i>	MALDI-TOF Mass Spectrometry	7
<i>Corynebacterium</i> species	bioMerieux API Coryne	1
No pathogens isolated		1
Specimen source not tested		7

Additional organisms reported		
<i>Streptococcus bovis</i>	Conventional biochemicals	1
	Siemens (Dade Behring) Positive Combo - any panel	1
	BD BBL Crystal Rapid Gram Positive	1

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 negative 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	49
Cepheid Xpert CT/NG	19
BD ProbeTec ET CT or CT/GC	10
Roche Diagnostics COBAS AMPLICOR CT/NG	4
BD Viper System	2
Laboratory Developed Test	1
Abbott RealTime CT/NG assay	1
Roche Diagnostics AMPLICOR CT/NG	1
Digene Hybrid Capture hc2 CT/GC	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 positive for Group A *Streptococcus* by 99% of the participating laboratories that processed it.

Test kits used by laboratories processing this specimen

Result	Mrthod	# Labs
Positive	Sekisui (Genzyme) OSOM Ultra Strep A	16
	Acceava Strep A	14
	BD Chek Group A Strep	9
	Cardinal Health SP Brand Strep A Dipstick	8
	Sekisui (Genzyme) OSOM Strep A Test	8
	Quidel QuickVue + Strep A	7
	Abbott Signify Strep A Dipstick	5
	BD Directigen EZ Strep A	5
	Meridian Bioscience ImmunoCard STAT Strep A	4
	Fisher Sure-Vue Signature Strep A Test	3
	Clearview Exact Strep A Dipstick	3
	Fisher Sure-Vue Strep A Lateral Flow Test	3
	Quidel Sofia Strep A FIA	3
	Stanbio QuStick Strep A Rapid Strip Test	2
	BD Veritor System For Rapid Detection of Group A Strep	2
	Polymedco Poly Stat Strep A	1
	Alere BinaxNow Strep A Card	1
	Signify Strep A dipstick	1
	Beckman Coulter Icon SC Strep A	1
	GenProbe Group A Strep	1
	Henry Schein One Step + Strep A Dipstick	1
	Quidel QuickVue Inline Strep A	1
Beckman Coulter Icon DS Strep A	1	
Quidel QuickVue Dipstick Strep A	1	
Negative	Acceava Strep A	1

BACTERIAL IDENTIFICATION BY PARTICIPATING LABORATORIES

Sample/Report	# Labs	%
SPECIMEN NUMBER 1 (Stool)		
<i>Salmonella</i> species	99	59.3
Salmonella species, not typhi	15	9.0
<i>Salmonella</i> serogroup G	6	3.6
<i>Salmonella</i> serogroup E	2	1.2
<i>Salmonella</i> species, Group E or G	9	5.4
<i>Salmonella</i> serogroup B	1	0.6
<i>Salmonella</i> serogroup C1	1	0.6
<i>Proteus vulgaris</i>	1	0.6
No pathogens isolated	32	19.2
Culture Negative for <i>Yersinia enterocolitica</i>	1	0.6
Number of laboratories processing sample	167	
Specimen source not tested	17	
SPECIMEN NUMBER 2 (CSF)		
<i>Haemophilus parainfluenzae</i>	137	83.5
<i>Haemophilus</i> species	2	1.2
<i>Haemophilus influenzae</i>	26	15.9
<i>Haemophilus parahaemolyticus</i>	1	0.6
Number of laboratories processing sample	164	
Specimen source not tested	20	
SPECIMEN NUMBER 3 (Abscess)		
Anaerobe		
<i>Fingoldia magna</i>	65	38.0
<i>Peptostreptococcus magnus</i>	70	40.9
<i>Peptostreptococcus</i> species	22	12.9
Anaerobic gram positive cocci	9	5.2
<i>Peptostreptococcus prevotii</i>	1	0.6
No anaerobic organisms	2	1.2
No <i>Bifidobacter</i> sp. isolated	2	1.2
Anaerobe not tested for the source	1	
Specimen source not tested	2	
Do not culture anaerobes	10	
Number of laboratories processing sample	171	
Aerobe		
<i>Staphylococcus aureus</i>	182	100
Specimen source not tested	2	
Number of laboratories processing sample	182	
SPECIMEN NUMBER 4 (Urine)		
<i>Escherichia coli</i>	184	100
Number of laboratories processing sample	184	
SPECIMEN NUMBER 5 (Sputum)		
<i>Moraxella (Branhamella) catarrhalis</i>	168	94.4
Alpha-hemolytic Streptococcus	7	4.0
<i>Corynebacterium</i> species	1	0.6
No pathogens isolated	1	0.6
Specimen source not tested	7	
Number of laboratories processing sample	177	

CHLAMYDIA – DIRECT DETECTION (Urine/cervical swab)		
Result	# Labs	%
Negative for <i>Chlamydia trachomatis</i>	88	100
GROUP A STREPTOCOCCUS - DIRECT DETECTION (Throat)		
Positive for Group A <i>Streptococcus</i>	101	99.0
Negative for Group A <i>Streptococcus</i>	1	1.0