

Mycobacteriology Proficiency Testing Program

Event 14-2 Results Summary, October 2014

Samples 14-2G, 14-2H, 14-2I and 14-2J contained *Mycobacterium tuberculosis*. Sample 14-2F contained *Mycobacterium fortuitum*.

I. Microscopy

EXPECTED RESULTS:

	Acid Fast Bacilli
14-2A	Absent
14-2B	Absent
14-2C	Present
14-2D	Present
14-2E	Present

SCORES FOR MICROSCOPY (97 PARTICIPANTS):

	Comprehensive Labs	Restricted Labs	Smears Only Labs	Total
100%	17	45	34	96
80-89%	1	0	0	1
<80%	0	0	0	0

	14-2A	14-2B	14-2C	14-2D	14-2E
Correct answer	97	96	97	97	97
Incorrect answer	0	1	0	0	0

STAINING METHOD

Carbol Fuschin: 38 laboratories (39.2%)

Fluorochrome: 32 laboratories (33.0%)

Carbol Fuschin + Fluorochrome: 27 laboratories (27.8%)

II. Identification/Drug Susceptibility

SCORES FOR ID

	Comprehensive Labs	Restricted Labs
100%	17	44
90-99%		2
80-89%	1	0
< 80%		0

SCORES FOR SUSCEPTIBILITY

	Comprehensive Labs
100%	18
90-99%	

One laboratory was exempt

OVERALL SCORES (MICROSCOPY, ID AND SUSCEPTIBILITY)

	Comprehensive Labs	Restricted Labs
100%	17	45
90-99%	1	1
80-89%	0	0
< 80%	0	0

RESULTS FOR 14-2F (*Mycobacterium fortuitum*)

Identification

Result	Method	Restricted	Comprehensive
<i>M. fortuitum</i>	DNA Sequencing		2
	MALDI-TOF Mass Spectrometry		1
	HPLC	1	
	Conventional Biochemicals	2	5
<i>M. fortuitum</i> group	DNA Sequencing	1	2
	Conventional Biochemicals	1	2
	MALDI-TOF Mass Spectrometry		2
	HPLC		1
<i>M. abscessus/chelonae</i> group	Conventional Biochemicals	1	
<i>M. abscessus</i>	Conventional Biochemicals	1	
Non-tuberculous Mycobacteria	HPLC		1
	DNA Sequencing		1
	GenProbe/Accuprobe	29	
	Conventional Biochemicals	1	
	PCR Assay	1	
Acid Fast Bacilli	Microscopy	5	

2 laboratories could not generate growth

Green: acceptable answer

Red: unacceptable answer

RESULTS FOR 14-2G (*Mycobacterium tuberculosis* pan-susceptible)

Identification

Result	Method	Restricted	Comprehensive
<i>M. tuberculosis</i> complex	GenProbe/Accuprobe	33	5
	HPLC		
	PCR Assay	2	
	Conventional Biochemicals		
<i>M. tuberculosis</i>	GenProbe/Accuprobe & Conventional Biochemicals	2	7
	GenProbe/Accuprobe & PCR Assay		1
	Conventional Biochemicals	2	2
	PCR Assay		2
	DNA Sequencing		
Acid Fast Bacilli	Microscopy	6	

Susceptibility

Antibiotic	Results	# Labs*
EMB1	Susceptible	16
INH1	Susceptible	16
PZA	Susceptible	14
	Resistant	2
RIF	Susceptible	16
SM1	Susceptible	11
	Resistant	2
	Not offered	3

Green: acceptable answer

Red: unacceptable answer

*: One comprehensive laboratory ceased drug susceptibility testing

RESULTS FOR 14-2H (*Mycobacterium tuberculosis* INH^R at 0.1µg/ml)

Identification

Result	Method	Restricted	Comprehensive
<i>M. tuberculosis</i> complex	GenProbe/Accuprobe	33	5
	HPLC		
	PCR Assay	2	
	Conventional Biochemicals		
<i>M. tuberculosis</i>	GenProbe/Accuprobe & Conventional Biochemicals	2	7
	GenProbe/Accuprobe & PCR Assay		1
	Conventional Biochemicals	2	2
	PCR Assay		2
	DNA Sequencing		
Acid Fast Bacilli	Microscopy	6	

Susceptibility

Antibiotic	Results	# Labs
EMB1	Susceptible	16
INH1	Resistant	15
	Susceptible	1
INH2	Susceptible	10
	Not offered	5
	Invalid	1
PZA	Susceptible	16
RIF	Susceptible	16
SM1	Susceptible	11
	Resistant	1
	Not offered	3
	Invalid	1

Green: acceptable answer

Red: unacceptable answer

*: One comprehensive laboratory ceased drug susceptibility testing

RESULTS FOR 14-2I (*Mycobacterium tuberculosis* INH^R at 0.1 µg/ml and 0.4 µg/ml)

Identification

Result	Method	Restricted	Comprehensive
<i>M. tuberculosis</i> complex	GenProbe/Accuprobe	33	5
	HPLC		
	PCR Assay	2	
	Conventional Biochemicals		
<i>M. tuberculosis</i>	GenProbe/Accuprobe & Conventional Biochemicals	2	7
	GenProbe/Accuprobe & PCR Assay		1
	Conventional Biochemicals	2	2
	PCR Assay		2
	DNA Sequencing		
Acid Fast Bacilli	Microscopy	6	

Susceptibility

Antibiotic	Results	# Labs
EMB1	Susceptible	16
INH1	Resistant	16
INH2	Resistant	9
	Susceptible	2
	Not offered	5
PZA	Susceptible	16
RIF	Susceptible	16
SM1	Susceptible	12
	Resistant	1
	Not offered	3

Green: acceptable answer

Red: unacceptable answer

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RESULTS FOR 14-2J (*Mycobacterium tuberculosis* pan-susceptible)

Identification

Result	Method	Restricted	Comprehensive
<i>M. tuberculosis</i> complex	GenProbe/Accuprobe	33	5
	HPLC		
	PCR Assay	2	
	Conventional Biochemicals		
<i>M. tuberculosis</i>	GenProbe/Accuprobe & Conventional Biochemicals	2	7
	GenProbe/Accuprobe & PCR Assay		1
	Conventional Biochemicals	2	2
	PCR Assay		2
	DNA Sequencing		
Acid Fast Bacilli	Microscopy	6	

Susceptibility

Antibiotic	Results	# Labs*
EMB1	Susceptible	16
INH1	Susceptible	16
PZA	Susceptible	14
	Resistant	2
RIF	Susceptible	16
SM1	Susceptible	13
	Not offered	3

Green: acceptable answer

Red: unacceptable answer

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