

**Microbiology Expert Committee (MEC)  
Meeting Summary**

**June 19, 2018**

1. Roll Call and Minutes:

Robin Cook, Chair, called the meeting to order at 1:35pm Eastern on June 19, 2018 by teleconference. Attendance is recorded in Attachment A – there were 7 members present. Associate Members: Mary Robinson Guest: Paul Junio and Allisa Snyder (City of Austin Water). Carl joined in at 2:34pm Eastern.

More time for review of the minutes was needed and they will be approved by email or at the next meeting.

2. Technical Director Requirements

Paul is on the call to talk about Technical Manager Requirements. A number of labs are struggling with a retiring work staff and labs are having issues finding someone to fulfill the Technical Manager requirements. The requirements are still the same as those in 2003.

Robin shared previous emails regarding Technical Manager requirement issues. There have been numerous concerns raised and questions asked about the Microbiology Technical Manager Requirements for years. She also mentioned that the Florida Society of Environmental Analysts (FSEA) gets requests for help in dealing with these requirements. In many cases it is people with lots of experience that raise the question. Most people are told to contact the AB and try to work through the solution.

Robin made it clear that this section of the Standard is not in the Micro section of the Standard. It is in Module 2. Quality Systems is reaching out for help.

Deb commented that if you do fecal or total by MF, you can argue that it is the same technology to do entero by EPA 1600. Deb asked if we can get something from the NELAP AC that states something like this. Paul noted the problem with the Standard is that it reads what it does. Some ABs implement the Standard as is and others have exceptions. Deb is going to ask Michelle Potter to ask the question to the NELAP AC. Robin wants to get away from the list. Talk about Technology instead of the organism.

Robin thinks things are over complicated. The Chemistry methods don't separate the methods by analyte. They have a number of analytes that can be analyzed using a technology. Couldn't Microbiology do something similar? People on the call agreed with Robin's concept. Move toward technology instead of organism.

Lew said that there can be different media and temperatures. Would this be a change in technique?

Deb noted that with DW and WW, the Federal Register is the definitive answer on what techniques are approved. This is relevant to what micro labs typically see. She is not talking about things like giardia and *Cryptosporidium*. Just conventional microbiology. She thinks the conventional things can be done without the 16 semester hour requirement. There needs to be some flexibility.

Robin pulled up the requirements for Technical Manager.

Paul noted that QS is looking at rewriting the requirements for Technical Manager. Currently there are some more flexible requirements for a limited subset of tests and perhaps expanding the tests, making it more generic or specifying technology would help. This will be one of the topics discussed during the special meeting on Wednesday afternoon in New Orleans. QS does not want to write the Microbiology requirements because they are not experts in this area. He can't guarantee that the work done by this committee (Microbiology Expert) will be adopted exactly as sent because it has to be adopted by the organization as a whole.

Robin and Paul noted the first paragraph is fine, but the second paragraph is where work needs to be done. Deb pointed out that as much as experience and knowledge she has, she would not qualify to be a Technical Manager because she does not have the second microbiology course. Kasey commented that she had 14 years of experience and still had to go back to school to pickup the additional 4 semester hours to qualify as a Technical Manager. Deb supports having classes, but 16 hours may be extreme. Robin commented that the only reason she had the 16 is because it is what her degree is in. This is a real issue for many labs.

Deb commented that NJ wants everyone to take the general microbiology class and they have some online training available, but they do also look at years of experience too.

Robin asked the committee if they would rather look at expanding the list or move towards stating technologies instead. She asked that people start thinking about this and provide ideas and comments.

Paul noted that this is not something QS needs immediately. The process of updating Module 2 will take quite some time. He would like to have some rough language or concept by New Orleans if possible to help with discussion there.

Robin noted that the biggest issue constantly arising is the entero issue. Perhaps adding this to the list is the simple fix. When the Standard was originally written it was not a target organism. Lew commented that there will be other things like this in the future, so the language should encompass the thought that newer things may need to be added. How can newer things be added simply without re-writing the Standard each time. Robin noted that this is why they emphasized technology in the 2016 Standard.

Robin asked if Deb could write an initial DRAFT and share it with the committee at the next meeting. Deb is willing to do this. Paul does not need to be copied on this information. He would prefer to receive something after the committee has discussed it.

The committee will work on the DRAFT language at the next meeting. There is no expectation that it has to be final language ... conceptual is fine too.

Deb asked Paul if he thinks the exception language ties to the captive laboratory concept. He thinks this is where it began, but he does not think there should be a difference. It is not limited to a captive lab.

Robin emphasized that the basic methodologies have been around for 40 years or so. It is the organisms that have changed.

### 3. Method Code Issue

Robin used Webex to look at Membrane Filtration (SM 9222B, C, D) – Attachment D. There are 73. She highlighted in red what she thinks should be deleted. Why do we need separate line items for the same technology. The only thing different in many of the entries in the table is a different organism. Or a confirmation step.

Robin would like to discuss this with the NELAP AC and then figure out how to get EPA to buy into it. She realizes this is no small task.

Robin commented that if an AB is willing to take multiple versions of Standard Method, then why does it matter which one a lab performed. Is the version number really needed? Why should it be in the method code? If they are all acceptable use, why include this information. The AB will look to make sure the correct method is used during their assessment. Deb commented that DW has different requirements, but this should work with most other programs.

Robin will send out Kasey (SM 9215) and Dwayne's (SM 9223) portions too. The method codes were looked at for all three methods discussed above and a DRAFT attempt at eliminating unnecessary method codes was attempted by Robin, Kasey and Dwayne for their specific method. This is the type of information they would like to use at the lunch meeting in New Orleans. She wants input before they go too far down the road doing the same thing with more methods.

EPA has other issues with method codes, but that is between EPA and TNI. At this time the committee is only looking at the Micro TNI Method Codes.

An AB could modify their paperwork, but they would need a way to track it back to this more concise TNI Method Code list.

Plan for lunch meeting: Give example tables and provide thought process in tables. Then ask for feedback.

The lunch and microbiology meeting are set for Thursday in New Orleans. Ilona asked that the committee decide by the next meeting whether they still a phone for the lunch meeting.

#### 4. Action Items

A summary of action items can be found in Attachment B. The action items were reviewed and updated in the table.

#### 5. New Business

Robin emailed an issue raised by the PT Expert Committee regarding reporting of less than values. She asked that everyone review it and respond by email. This can be further discussed next month.

#### 6. Next Meeting and Close

The next meeting will be held by teleconference on July 11, 2018 at 1:30pm Eastern.

A summary of action items and backburner/reminder items can be found in Attachment B and C.

Robin adjourned the meeting at 2:55 pm Eastern.

**Attachment A  
Participants  
Microbiology Expert Committee (MEC)**

<b>Members</b>	<b>Affiliation</b>	<b>Balance</b>	<b>Contact Information</b>
Robin Cook (Chair) (2019) <b>Present</b>	City of Daytona Beach EML	Lab	<a href="mailto:cookr@codb.us">cookr@codb.us</a>
Patsy Root (2019) <b>Absent</b>	IDEXX Laboratories, Inc	Other	<a href="mailto:patsy-root@idexx.com">patsy-root@idexx.com</a>
Lew Denny (2021*) <b>Present</b>	Flowers Chemical Laboratories – North	Lab	<a href="mailto:lewdenny@comcast.net">lewdenny@comcast.net</a>
Jessica Hoch (2019*) <b>Absent</b>	TCEQ	AB	<a href="mailto:Jessica.Hoch@Tceq.Texas.Gov">Jessica.Hoch@Tceq.Texas.Gov</a>
Deb Waller (2019) <b>Present</b>	NJ DEP	AB	<a href="mailto:debra.waller@dep.nj.gov">debra.waller@dep.nj.gov</a>
Dwayne Burkholder (2019) <b>Absent</b>	Pennsylvania DEP	AB	<a href="mailto:dburkholde@pa.gov">dburkholde@pa.gov</a>
Michael Blades (2021*) <b>Present</b>	ERA	Other	<a href="mailto:mblades@eraqc.com">mblades@eraqc.com</a>
Brad Stawick (2019*) <b>Absent</b>		Lab	<a href="mailto:Brad.stawick@stawicklabbmgmt.com">Brad.stawick@stawicklabbmgmt.com</a>
Kasey Raley (Vice-chair) (2020*) <b>Present</b>	Eurofins Eaton Analytical, Inc.	Lab	<a href="mailto:KaseyRaley@eurofinsUS.com">KaseyRaley@eurofinsUS.com</a>
Vanessa Soto Contreras (2020*) <b>Absent</b>	Florida DOH	AB	<a href="mailto:Vanessa.SotoContreras@flhealth.gov">Vanessa.SotoContreras@flhealth.gov</a>
Gary Yakub (2020) <b>Absent</b>	Environmental Standards, Inc.	Other	<a href="mailto:gyakub@envstd.com">gyakub@envstd.com</a>
Enoma Omoregie (2021*) <b>Present</b>	NYCDEP	Other	<a href="mailto:eomoregie@health.nyc.gov">eomoregie@health.nyc.gov</a>
Christabel Monteiro (2021*) <b>Present</b>	ESC	Lab	<a href="mailto:cmonteiro@esclabsciences.com">cmonteiro@esclabsciences.com</a>
Ilona Taunton (Program Administrator) <b>Present</b>	The NELAC Institute	n/a	<a href="mailto:Ilona.taunton@nelac-institute.org">Ilona.taunton@nelac-institute.org</a>

**Attachment B**

**Action Items – MEC**

	<b>Action Item</b>	<b>Who</b>	<b>Expected Completion</b>	<b>Actual Completion</b>
1	Review Method codes and send comments to Robin for Dan Hickman.	Deb	TBD	
19	Provide EPA interpretation on temperature readings to Ilona. She will have it posted on the website.	Robin	1/31/14	
74	Send questions for ABs regarding method codes to Robin.	ALL	3/15/18	
76	Provide an update on what has been done with the databases after Jennifer's review and internal EPA meetings.	Jennifer	4/10/18	
77	TNI send LAMS information and list of NELAP ABs to Deric.	Ilona	3/31/18	Complete. Jerry sent.
78	Forward link to PDFs on DW website with rule, method and analyte information.	Jennifer	3/31/18	
79	Work on method code list for 9222B and D, 9215 and 9223 and send to committee before next meeting.	Robin, Kasey and Dwayne	6/12/18	
80	Prepare DRAFT language for Micro Technical Manager Requirements for discussion at next meeting.	Deb	7/10/18	



Attachment D – Robin’s Table – SM 9222 B, C, D

Color Code: Red – Recommend Delete Orange -

20197802	SM 9222 B (LES Endo)	18th ED	1991	Membrane Filtration Qualitative (LES Endo): Total Coliform	MF-E-QL
20198009	SM 9222 B (LES Endo)	19th ED	1994	Membrane Filtration Qualitative (LES Endo): Total Coliform	MF-E-QL
20198203	SM 9222 B (LES Endo)	20th ED	1997	Membrane Filtration Qualitative (LES Endo): Total Coliform	MF-E-QL
20198407	SM 9222 B (LES Endo)	21st ED	1997	Membrane Filtration Qualitative (LES Endo): Total Coliform	MF-E-QL
20198601	SM 9222 B (LES Endo) plus (EC MUG)	18th ED	1991	Membrane Filtration Qualitative (LES Endo EC MUG): Total Coliform and E. Coli	MF-E-QL
20199002	SM 9222 B (LES Endo) plus 9221 E (EC)	18th ED	1991	Membrane Filtration Qualitative (LES Endo EC): Fecal Coliform	MF-E-QL
20199206	SM 9222 B (LES Endo) plus 9221 E (EC)	19th ED	1994	Membrane Filtration Qualitative (LES Endo EC): Fecal Coliform	MF-E-QL
20199400	SM 9222 B (LES Endo) plus 9221 E (EC)	20th ED	1997	Membrane Filtration Qualitative (LES Endo EC): Fecal Coliform	MF-E-QL
20199604	SM 9222 B (LES Endo) plus 9221 E (EC)	21st ED	1997	Coliform by Standard Total Coliform Membrane Filter Procedure	MF-E-QL
20199808	SM 9222 B (LES Endo) plus 9221 E (EC)-1997		1997	Coliform by Standard Total Coliform Membrane Filter Procedure	MF-E-QL
30199831	SM 9222 B (LES Endo) plus 9221 E (EC)-2006		2006	Total and Fecal Coliform by Membrane Filtration Quantitative - LES Endo/EC	MF-E-QN
20222600	SM 9222 B (LES Endo) plus 9221 F (EC MUG)	18th ED	1991	Membrane Filtration Qualitative (LES Endo/EC MUG): Total Coliform and E. coli	MF-F-QL



20222804	SM 9222 B (LES Endo) plus 9221 F (EC MUG)	19th ED	1994	Membrane Filtration Qualitative (LES Endo/EC MUG): Total Coliform and E. coli	MF-F-QL
20223001	SM 9222 B (LES Endo) plus 9221 F (EC MUG)	20th ED	1997	Membrane Filtration Qualitative (LES Endo/EC MUG): Total Coliform and E. coli	MF-F-QL
20223205	SM 9222 B (LES Endo) plus 9221 F (EC MUG)	21st ED	1997	Membrane Filtration Qualitative (LES Endo/EC MUG): Total Coliform and E. coli	MF-F-QL
20223409	SM 9222 B (LES Endo) plus 9221 F (EC MUG)-1997		1997	Membrane Filtration Qualitative (LES Endo/EC MUG): Total Coliform and E. coli	MF-F-QL
20201007	SM 9222 B (LES Endo) plus G (EC MUG)	19th ED	1994	Membrane Filtration Qualitative (LES Endo EC MUG): Total Coliform and E. Coli	MF-F-QL
20201201	SM 9222 B (LES Endo) plus G (EC MUG)	20th ED	1997	Membrane Filtration Qualitative (LES Endo EC MUG): Total Coliform and E. Coli	MF-F-QL
20201405	SM 9222 B (LES Endo) plus G (EC MUG)	21st ED	1997	Membrane Filtration Qualitative (LES Endo EC MUG): Total Coliform and E. Coli	MF-F-QL
20201609	SM 9222 B (LES Endo) plus G (EC MUG)-1997		1997	Membrane Filtration Qualitative (LES Endo EC MUG): Total Coliform and E. Coli	MF-F-QL
20202408	SM 9222 B (LES Endo) plus G (NA MUG)-1997		1997	E. Coli by Membrane Filtration (LES Endo/NA MUG):	MF-F-QL
20202602	SM 9222 B (LES Endo)-1997		1997	Membrane Filtration Qualitative (LES Endo): Total Coliform	MF-F-QL
20202624	SM 9222 B (LES Endo)-2006		2006	Membrane Filtration Qualitative (LES Endo): Total Coliform	MF-E-QL
20202420	SM 9222 B plus G (NA MUG)-2006		2006	Total coliform and E.coli by Membrane Filtration Quantitative (m-Endo/NA MUG)	MF-F-QN

20202806	SM 9222 B	18th ED	1991	Membrane Filtration Quantitative : Total Coliform	MF-E-QN
20203003	SM 9222 B	19th ED	1994	Membrane Filtration Quantitative : Total Coliform	MF-E-QN
20203207	SM 9222 B	20th ED	1997	Membrane Filtration Quantitative : Total Coliform	MF-E-QN
20203401	SM 9222 B	21st ED	1997	Membrane Filtration Quantitative : Total Coliform	MF-E-QN
20203412	SM 9222 B	22nd ED	2010	Membrane Filtration Quantitative : Total Coliform	MF-E-QN
20227401	SM 9222 B plus (EC MUG)	18th ED	1991	Membrane Filtration Qualitative (M-Endo/EC MUG): Total Coliform and E. Coli	MF-E-QN
20227605	SM 9222 B plus (NA MUG)	18th ED	1991	Membrane Filtration Quantitative (m-Endo/NA MUG): E. Coli	MF-E-QN
20227809	SM 9222 B plus (NA MUG)	18th ED	1991	Membrane Filtration Qualitative (M-Endo/NA MUG): Total Coliform and E. Coli	MF-E-QN
20203605	SM 9222 B plus 9221 E (EC)	18th ED	1991	Membrane Filtration Qualitative (M-Endo EC): Fecal Coliform	MF-E-QN
20203809	SM 9222 B plus 9221 E (EC)	19th ED	1994	Membrane Filtration Qualitative (M-Endo EC): Fecal Coliform	MF-E-QN
20204006	SM 9222 B plus 9221 E (EC)	20th ED	1997	Membrane Filtration Qualitative (M-Endo EC): Fecal Coliform	MF-E-QN
20204200	SM 9222 B plus 9221 E (EC)	21st ED	1997	Membrane Filtration Qualitative (M-Endo EC): Fecal Coliform	MF-E-QN

20204404	SM 9222 B plus 9221 E (EC)-1997		1997	Membrane Filtration Qualitative (M-Endo EC): Fecal Coliform	MF-E-QN
20204426	SM 9222 B plus 9221 E (EC)-2006		2006	Total and Fecal Coliform by Membrane Filtration Quantitative (m-Endo EC)	MF-E-QN
20204437	SM 9222 B plus 9221 F (EC MUG)-2006		2006	Total Coliform and E. coli by Membrane Filtration Qualitative (m-Endo/EC MUG)	MF-E-QL
20250004	SM 9222 B plus G (EC MUG)	19th ED	1994	Membrane Filtration Quantitative (M-Endo/EC MUG): E. Coli	MF-F-QN
20206002	SM 9222 B plus G (EC MUG)	20th ED	1997	Membrane Filtration Quantitative (M-Endo/EC MUG): E. Coli	MF-F-QN
20206206	SM 9222 B plus G (EC MUG)	21st ED	1997	Membrane Filtration Quantitative (M-Endo/EC MUG): E. Coli	MF-F-QN
20206400	SM 9222 B plus G (EC MUG)-1997		1997	Membrane Filtration Quantitative (M-Endo/EC MUG): E. Coli	MF-F-QN
20206433	SM 9222 B plus G (EC MUG)-2006		2006	Total Coliform and E. Coli by Membrane Filtration Qualitative (m-Endo/EC MUG)	MF-F-QL
20228006	SM 9222 B plus G (NA MUG)	19th ED	1994	Membrane Filtration Qualitative (M-Endo/NA MUG): Total Coliform and E. Coli	MF-E-QN
20206604	SM 9222 B plus G (NA MUG)	19th ED	1994	Membrane Filtration Quantitative (M-Endo/NA MUG): E. Coli	MF-F-QN
20228200	SM 9222 B plus G (NA MUG)	20th ED	1997	Membrane Filtration Qualitative (M-Endo/NA MUG): Total Coliform and E. Coli	MF-E-QL
20206808	SM 9222 B plus G (NA MUG)	20th ED	1997	Membrane Filtration Quantitative (M-Endo/NA MUG): E. Coli	MF-F-QN

20228404	SM 9222 B plus G (NA MUG)	21st ED	1997	Membrane Filtration Qualitative (M-Endo/NA MUG): Total Coliform and E. Coli	MF-E-QL
20207209	SM 9222 B plus G (NA MUG)-1997		1997	Membrane Filtration Qualitative (M-Endo/NA MUG): Total Coliform and E. Coli	MF-E-QL
20207403	SM 9222 B -1997		1997	Membrane Filtration Quantitative : Total Coliform	MF-QN
20207607	SM 9222 B 5c enrichment	18th ED	1991	Membrane Filtration Quantitative (with enrichment): Total Coliform and E. coli	MF-2S-QN
20207801	SM 9222 B 5d enrichment	19th ED	1994	Membrane Filtration Quantitative (with enrichment): Total Coliform and E. coli	MF-2S-QN
20208008	SM 9222 B 5d enrichment	20th ED	1997	Membrane Filtration Quantitative (with enrichment): Total Coliform and E. coli	MF-2S-QN
20208202	SM 9222 B 5d enrichment	21st ED	1997	Membrane Filtration Quantitative (with enrichment): Total Coliform and E. coli	MF-2S-QN
20208406	SM 9222 B 5d enrichment-1997		1997	Membrane Filtration Quantitative (with enrichment): Total Coliform and E. coli	MF-2S-QN
20208428	SM 9222 B-2006		2006	Membrane Filtration Quantitative : Total Coliform	MF-E-QN
20037201	SM 9222 C	18th ED	1991	Membrane Filtration Quantitative (Delayed Incubation): Total Coliform	MF-E-QN
20208600	SM 9222 C	19th ED	1994	Membrane Filtration Quantitative (Delayed Incubation): Total Coliform	MF-E-QN
20208804	SM 9222 C	20th ED	1997	Membrane Filtration Quantitative (Delayed Incubation): Total Coliform	MF-E-QN

20209001	SM 9222 C	21st ED	1997	Membrane Filtration Quantitative (Delayed Incubation): Total Coliform	MF-E-QN
20209012	SM 9222 C	22nd ED	2006	Membrane Filtration Quantitative (Delayed Incubation): Total Coliform	MF-E-QN
20209205	SM 9222 C-1997		1997	Membrane Filtration Quantitative (Delayed Incubation): Total Coliform	MF-E-QN
20228608	SM 9222 D (FC) plus (NA MUG)	18th ED	1991	Membrane Filtration Quantitative (FC/NA MUG): E. Coli	MF-QN
20228802	SM 9222 D (FC) plus G (NA MUG)	19th ED	1994	Membrane Filtration Quantitative (FC/NA MUG): E. Coli	MF-QN
20228857	SM 9222 D (FC) plus G (NA MUG)-1997		1997	Membrane Filtration Quantitative (FC/NA MUG): E. Coli	MF-QN
20037405	SM 9222 D (m-FC)	18th ED	1991	Membrane Filtration Quantitative (m-FC): Fecal Coliform	MF-E-QN
20209409	SM 9222 D (m-FC)	19th ED	1994	Membrane Filtration Quantitative (m-FC): Fecal Coliform	MF-E-QN
20209603	SM 9222 D (m-FC)	20th ED	1997	Membrane Filtration Quantitative (m-FC): Fecal Coliform	MF-E-QN
20209807	SM 9222 D (m-FC)	21st ED	1997	Membrane Filtration Quantitative (m-FC): Fecal Coliform	MF-E-QN
20209818	SM 9222 D (m-FC)	22nd ED	2010	Membrane Filtration Quantitative (m-FC): Fecal Coliform	MF-E-QN
20210008	SM 9222 D (m-FC)- 1997		1997	Membrane Filtration Quantitative (m-FC): Fecal Coliform	MF-E-QN

20210019	SM 9222 D-2006		2006	Membrane Filtration Quantitative: Fecal Coliform	MF-E-QN
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