TNI Micro FoPT Subcommittee Minutes for 12/10/13

Present: Fred Anderson (Advanced Analytical Solutions), Jennifer Best (EPA), Mike Blades (ERA), Susan Butts (SCDHEC), Bennie Cockerel (SCDHEC), Andy Lincoff (EPA), Jennifer Loudon (Raritan Township Municipal Utilities Authority), Jeff Lowry (Phenova), Pasty Root (IDEXX), Andy Valkenberg (Energy Lab), Chris Rucinski (RTC), Mark Hammersla (NSI)

Patsy Root moved to approve the minutes of 10/21/13
Second by Jennifer Louden
Minutes Approved by unanimous vote, 2 abstentions (Andy Lincoff and Andy Valkenberg, both absent on 10/21/13).

The outline for the call was provided by Susan Butts, as follows:

> *Submitted 12/9/13 to Micro FoPT subcommittee for review and discussion for call on 12/10/13*
>
> Questions to consider when determining appropriate preparation ranges of qualitative micro samples
>
> Is the current range for total coliform, fecal coliform, E. *coli* MPN PT samples appropriate to apply to presence/absence qualitative PTs?
>
> Should we consider different ranges between E. *coli* and non-coliform bacteria used for negative samples and bacteria used for total coliform positive/E. *coli* negative samples used for negative samples? Or should all bacteria ranges be the same regardless of bacteria type?
>
> For all other bacteria (other than E. *coli*), would a cap at 500 CFU be reasonable? Or is this too high? Too low?
>
> Would the low end of the total coliform/E. *coli* MPN range of 20 CFU be acceptable for all other types of bacteria?
>
> Would using the total coliform/E. *coli* MPN range of 20-500 CFU for all bacteria in P/A samples be reasonable for all providers?
>
> Would this be in opposition to any international requirements?
>
> Would this change work processes for any PT providers?
>
> Are there any approved drinking water methods where this range would not be feasible for presence/absence? What about MF methods – TNTC?

Discussion:

Is the current range for total coliform, fecal coliform, E. coli MPN PT samples (20 to 200 per 100 mL) appropriate to apply to presence/absence (PA) qualitative PTs?

There was agreement that the range should not go below 20. Although all approved culture methods should be able to detect lower numbers of target bacteria, it would increase the difficulty and cost to manufacture such samples while still ensuring the prevention of false negatives. There was not agreement on an upper limit. All methods should work at 200, but one commenter suggested that no upper limit was appropriate for PA - if a batch was prepared and found to be above 200, it should still be useable for PA. Another commented that PT providers would have to change the PA prep method in order to manufacture within a prescribed range.

Should we consider different ranges for bacteria used for negative controls, or should all bacteria ranges be the same regardless of bacteria type?

There was agreement that PTs should challenge the methods and analysts, so it would be appropriate to have a higher range for negative controls than for positive controls.

For all other bacteria (other than E. coli), would a cap at 500 CFU be reasonable? Or is this too high? Too low? Would the low end of the total coliform/E. coli MPN range of 20 CFU be acceptable for all other types of bacteria? Would using the total coliform/E. coli MPN range of 20-500 CFU for all bacteria in P/A samples be reasonable for all providers?

While a higher range for negative control bacteria would be desirable, it is important that it not be so high as to cause invalidations or false positives. Jennifer Best said that heterotrophs over 50,000/ 100 mL may cause the MTF test to be invalid. High numbers of non-targets are also going to be a bigger problem for MF. There was not a suggestion given for an appropriate high limit.

Would this be in opposition to any international requirements?

One commenter stated that no other accreditation program worldwide has a prescribed PT range for PA samples, and that this is not something that should be pursued.

Would this change work processes for any PT providers?

One commenter stated that manufacturing within a range will require a different preparation method and more work for PT providers. Another expressed concern that this would increase the price of PTs.

Are there any approved drinking water methods where this range would not be feasible for presence/absence? What about MF methods – TNTC?

A commenter stated that it was important that the number was never so high that MF plates would be TNTC or require dilution to analyze as labs would have to request additional samples from PT providers.

There was additional discussion about whether there should be a range for PA samples at all. One commenter suggested the subcommittee should conclude that there should not be a proposed range – the current system works. Another said that micro PA is the only product on the FoPT tables that does not have a specified design range and that a range would help ensure consistency among providers.

Susan stated that there were really two questions. 1) is 20-200 or some other range appropriate, and 2) should it be applied. The Micro FoPT subcommittee was tasked to propose preparation ranges to the Executive Committee. The Executive Committee would decide whether they should be added.

Susan asked if everyone agreed that the lower limit for coliforms and E. coli in a PT should be 20. There was unanimous agreement.

Susan asked if there should be a lower limit for negative controls. There were no suggestions. Current PT data shows a range from 30 to >500.

Susan asked that everyone think about an appropriate range for each type of sample and e-mail them to her.

Motion to adjourn, Jennifer Best; second Andy Valkenberg