



Technical Issues Observed in an Environmental Laboratory - A Discussion

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Topics

- Issues commonly observed:
 - Management
 - Laboratory Updates
 - Technical Managers
 - Chemistry
 - Method Detection Limits
 - Method Version/Revision
 - Microbiology
 - Sterility
 - Reporting

Management Issues



<https://jingsourcing.com/wp-content/uploads/2021/12/QC-VS-QA-1.jpg>

Laboratory Updates



What are items a laboratory must notify TCEQ about?



When should a laboratory notify TCEQ about updates?

Technical Manager



Can anyone be a Technical Manager?



What are the requirements for a TM?

Technical Manager

- What does this TNI Volume 1 Module 2 standard 4.1.7.2.a mean?
 - The laboratory's technical manager(s) shall be a member of the staff of an environmental laboratory who exercises actual day-to-day supervision of laboratory operations for the appropriate fields of accreditation and reporting of results
- Legacy acknowledgement

Chemistry Issues



[A Man and a Woman Doing an Experiment · Free Stock Photo](#)



Determination Level/Limit of Quantitation



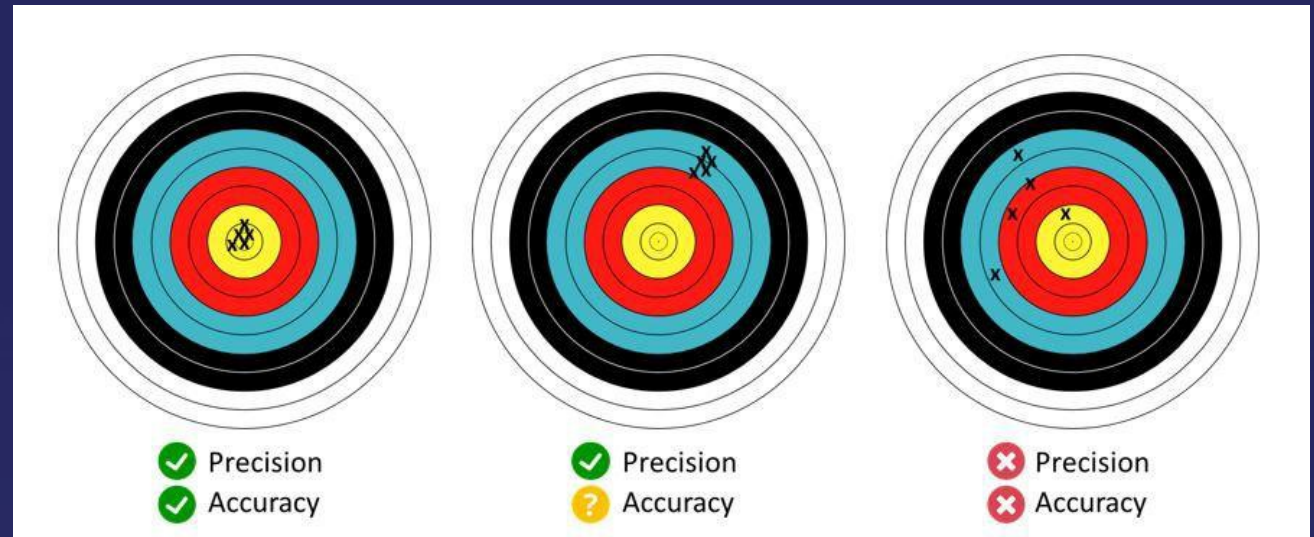
Why are they important?



How frequently do they need to be run?

Validation Studies

- Optimal amounts
- Establishes instrument sensitivity
- Obtain reliable results from a range of quantities
 - To include the upper and lower limits of the method
 - Thresholds for qualitative and quantitative information

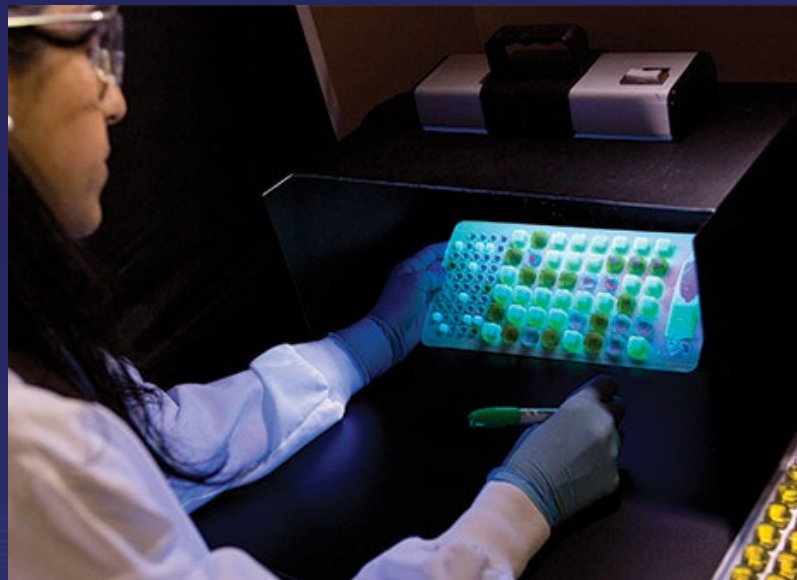


<https://www.nist.gov/image/precision>

Method Version/Revision

- Matrix dependent
- Code of Federal Registration
- SW-846
- TCEQ requirements

Microbiology Issues



[Enterolert - IDEXX US](#)



Sterility Checks

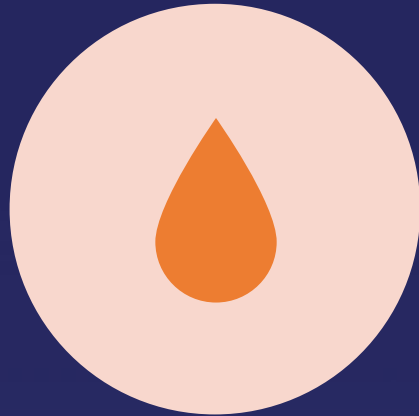


Can one laboratory in a system (i.e. noncontiguous) check for the sterility of a lot for all other locations?



Can Colilert® bottles submitted without QC?

Reporting Results



Drinking Water:
V1M2 5.10.1: written agreement for TCEQ MRF
V1M2 5.10.10: exceptions



All Other Matrices:
Must follow the remaining V1M2 5.10 unless noted
as an exception

Questions?

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