



# **SM 1020/1030C**

# **QUALITY ASSURANCE**

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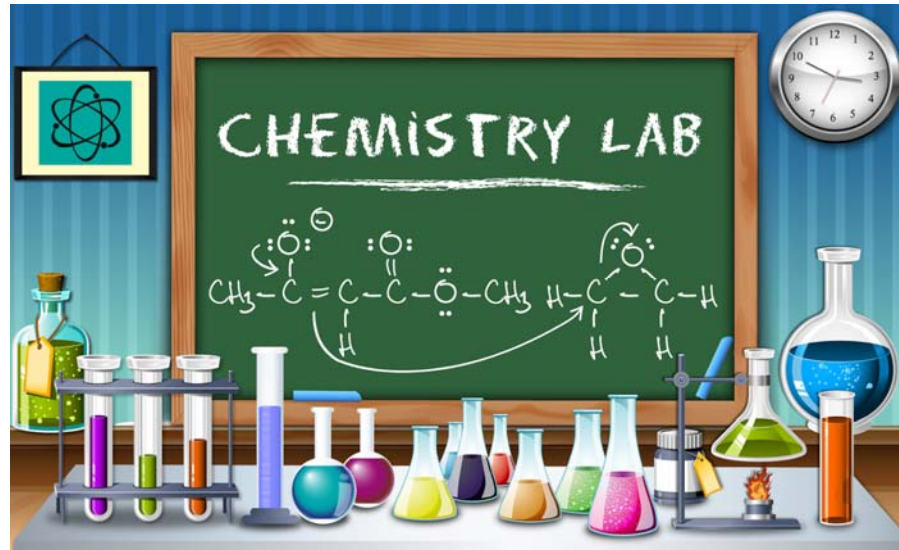
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# OVERVIEW

- 1020A Quality Assurance Plan
- 1020B Quality Control Parameters
  - ▣ Demonstrations of Capability, MDL determination, Blanks, LFB/LCS, LFM, Duplicates, Internal Standards, Surrogates
- 1020C Quality Assessment
- 1030C Method Detection Level

# SM 1020A Quality Assurance Plan

- ❑ QAPs must include a policy on Method Detection Levels (MDLs) ***and*** Minimum Reporting Levels (MRLs).
- ❑ QAP revision numbers must be included on the title page.



# SM 1020A QAP (cont'd.)

- MDLs not applicable to biological, microbiological, or radiological analyses
- Report results below the **Minimum Quantitation Level (MQL)** or MDL according to SOP, regulatory requirements or general laboratory policy.
  - ▣ MQL – AKA LOD; lowest quantity that can be distinguished from blank at stated confidence limit.

# SM 1020B Quality Control

- Operational Range
  - ▣ Determine upper and lower limits of calibration range
  - ▣ Ensure the range shows increasing instrument response
  - ▣ QAPs must define acceptance criteria
- Initial Demonstration of Capability – no changes
- Ongoing Demonstration of Capability
  - ▣ LCS, QC Check Sample, LFB
  - ▣ 10% acceptance criteria for secondary source standards

# SM 1020B Quality Control (cont'd.)

- Method Detection Level Determination
  - ▣ More prescriptive
  - ▣ Must be performed/verified for each analyst **and** instrument
  - ▣ **Ideally**, perform annually



# SM 1020B Quality Control (cont'd.)

- LFB/LCS
  - May be prepared from primary or secondary source
- Laboratory Fortified Matrix
  - Prepare from same source as LFB/LCS
  - Option to prepare at less than or equal to midpoint of calibration curve and at least 10x MRL
  - See tables in SM 2020, 4020, 5020, 6020 for relevancy

# SM1020B Quality Control (cont'd.)

- Duplicates/LFM Dups
  - If duplicates are both less than or equal to 5x the MRL they aren't used and the LFB/LCS will validate the analytical batch.



# SM1020C Quality Assessment

*No Changes!*



# SM 1030C Method Detection Level

- No significant changes
  - PQL (MRL) set **about** 3-5x greater than the MDL
  - New MDL method is in draft form (2015 MUR)





ANY  
QUESTIONS?