

Significant Changes to WSC-CAM-III A (6010D): *Quality Control Requirements and Performance Standards for the Analysis of Trace Metals by Inductively Coupled Plasma-Optical Emission Spectrometry (ICP-OES) in Support of Response Actions under the Massachusetts Contingency Plan (MCP)*

- CAM reporting limits (RLs) for barium and selenium in aqueous samples were lowered from 25-50 µg/L to 5-10 µg/L based on current laboratory-achievable RLs.
- CAM RLs for arsenic, barium, and nickel in soil samples were lowered from 1-7 mg/kg to 0.2-1 mg/kg based on current laboratory-achievable RLs.
- Specific requirements for dissolved/filtered aqueous samples were included as follows:
 - Dissolved/filtered samples may be analyzed directly, without digestion, as long as an internal standard is used to monitor for interferences and samples are acidified to match the calibration standards.
 - If dissolved/filtered aqueous samples are analyzed directly (not digested) and matrix interferences are present, as measured by low (outside of control limits) internal standard responses, the laboratory should digest the samples to try and reduce the interferences and repeat the analyses to obtain more accurate results.
 - For aqueous samples, the laboratory must note whether the results are “total” or “dissolved” in the laboratory narrative or on the report form. In addition, if “dissolved”, the laboratory must note whether the samples were filtered in the field or at the laboratory.
 - If samples are filtered and preserved at the laboratory, the laboratory must wait 24 hours prior to analysis to allow enough time for metals to become solubilized.
- Requirements for lower limit of quantitation (LLOQ) verifications were included, as required in SW-846 method 6010D.
- The procedure for determining the linear range was revised in accordance with SW-846 method 6010D.
- Requirements to re-calculate the low-level and mid-level initial calibration standard using the new curve were included, as required in SW-846 method 6010D.
- References to interference check samples were removed and replaced with spectral interference checks (SICs), as required in SW-846 method 6010D.
- A requirement to perform a dilution test or post-digestion spike was added to the required corrective action for matrix spike nonconformances, as required in SW-846 method 6010D.
- Acceptance criteria for the dilution test were revised, as per SW-846 method 6010D.
- Post-digestion spikes were added to Table III A-1, Specific QC Requirements and Performance Standards for Metals (SW-846 6010D) Using WSC-CAM-III A.
- Samples with concentrations of metals higher than Individual Element SIC must be diluted until concentration < the SIC, even if the high concentration element is not required to be reported for the specific sample.