
Clean Water Act: Analytical Methods Activities

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Office of Water

CWA Methods Information

- **WWW.EPA.GOV/WATERSCIENCE/METHODS/**
 - Facts Sheets, FAQs, Rule Text, EPA Methods
- Send an email to us at: **OSTCWAMETHODS @ EPA.GOV**
 - For lab accreditation or permit questions consult your permitting or accrediting authority.
- **CWA Methods Team**
 - Dr Richard Reding
 - Ms. Meghan Hessenauer
 - Ms. Marion Kelly
 - Dr. Robin Oshiro
 - Mr. Lemuel Walker



ATP Contacts

- Region 1 – Art Clark*
- Region 2 – Carol Lynes, Donna Ringel
- Region 3 – Charles Jones, Angela McFadden, Joe Slayton*
- Region 4 - Ray Terhune, Mike Wasko, Jenny Scrifres
- Region 5 - Kenneth Gunter, Kevin Bolger
- Region 6 - David Stockton, Ray Flores*
- Region 7 - Larry Marchin
- Region 8 – Jeff Pritt*, Linda Himmelbauer
- Region 9 – Roseanne Sakamoto*, Steve Remaley*
- Region 10 – Katie Adams*, Gina Grepo-Grove, Jennifer Crawford



Amendments to Part 136

EPA plans to amend 40 CFR Part 136 to:

- Add new or revised methods for inorganic pollutants (including cyanide, metals, oil & grease), organic pollutants, microbes and contaminants of emerging concern
- Provide more examples of implementing a performance based approach to allowed modifications to approved methods without prior EPA review
- Specify essential method QC elements for methods used for CWA compliance monitoring
- Clarify role of national vs. limited use ATPs
- Revise sample collection, preservation and and storage requirements
- Remove EPA method Text printed in Appendices to Part 136



Why Promulgate New CWA Methods?

- New technologies can offer more effective, sensitive, selective or accurate methods for compliance monitoring
- New methods to measure Contaminants of Emerging Concern (CECs), PCB Congeners, Acid Mine Drainage, new standards, data gathering
- More choices of analytical tools



Frequently Asked Questions

- Grab vs. Composite Sampling
- Changes to Sample Collection, Preservation and Holding Time Procedures
 - Cyanide
 - Bacterial Tests
- Use of Collision or Reaction Cells with ICP-MS
- Acceptable Versions and ATPs which reference methods from MCAWW that were withdrawn in the 2007 MUR

Grab vs. Composite Samples

- Grab samples must be collected for
 - pH
 - Temperature
 - Cyanide
 - Total phenols
 - Residual Chlorine
 - Oil & grease
 - Fecal Coliform (including *E. coli*)
 - Enterococci
- For all other pollutants, a 24-hour composite sample, using a minimum of four (4) grab samples, must be used unless specified otherwise at 40 CFR Part 136

Changes to Sample Collection, Preservation and Holding Time Procedures

➤ Cyanide

- Sampling, preservation and mitigating interferences in water samples for analysis of cyanide are described in ASTM D7365-09a. There may be interferences that are not mitigated by the analytical test methods or D7365-09a. Any technique for removal or suppression of interference may be employed, provided the laboratory demonstrates that it more accurately measures cyanide through quality control measures described in the analytical test method. Any removal or suppression technique not described in D7365-09a or the analytical test method must be documented along with supporting data.

➤ Bacterial Tests

- Sample analysis should begin as soon as possible after receipt; sample incubation must be started no later than 8 hours from time of collection

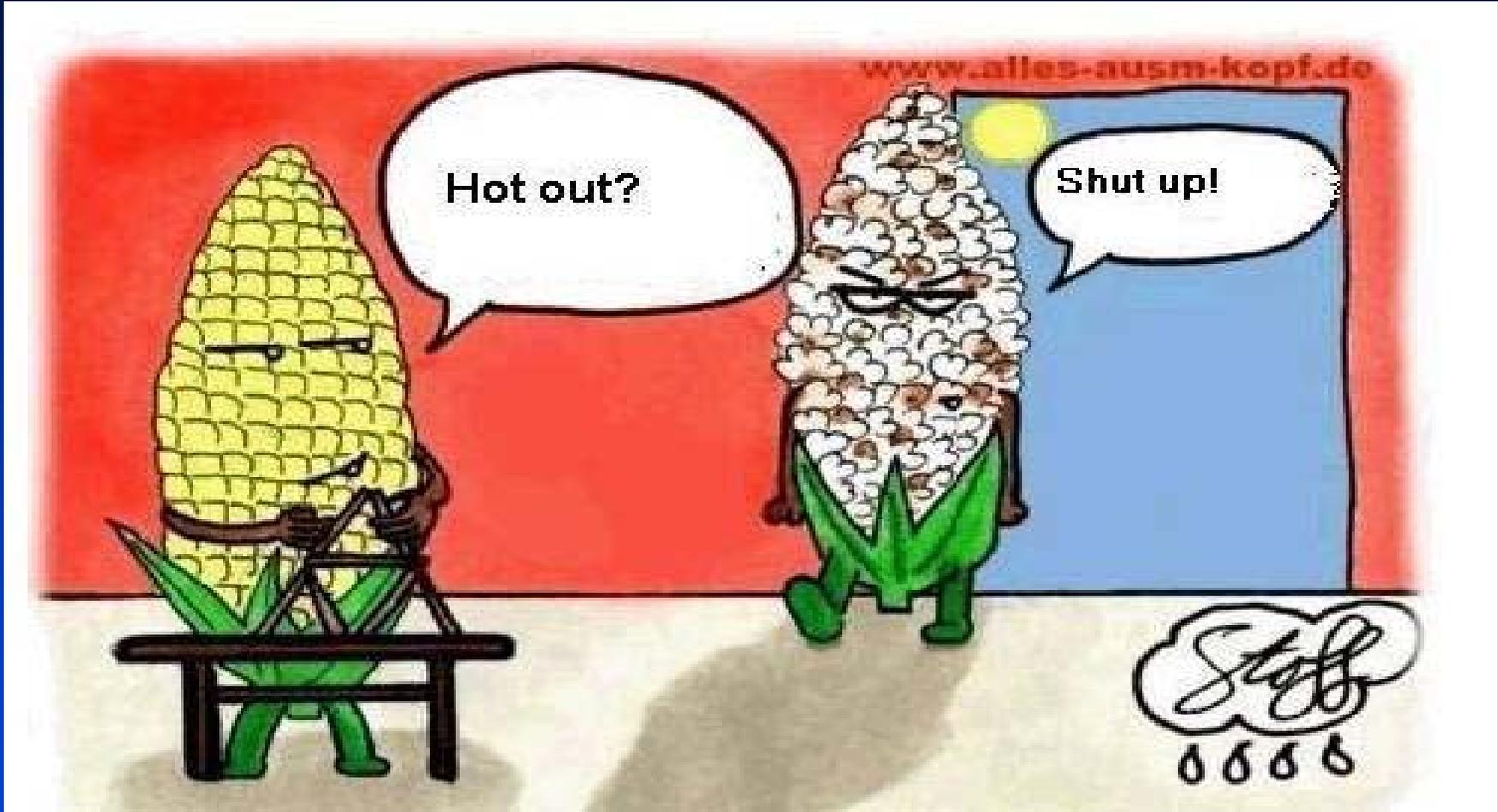


Use of Collision or Reaction Cells

- In general, ICP-MS is a sensitive and selective detector for metal analysis; however isobaric interference can cause problems for quantitative determination as well as identification based on the isotope pattern. Interference reduction technologies, such as collision or reaction cells, are designed to reduce the effect of spectroscopic interferences that may bias results for the element of interest. The use of interference reduction technologies is allowed provided the method performance specifications relevant to ICP-MS measurements are met.

Withdrawal of MCAWW Methods

- Does the withdrawal of MCAWW Methods in the 2007 MUR affect approval of any Alternate Test Procedure (ATP) program method that was originally compared to a now withdrawn EPA method?
- No. We did not propose or intend to do so. There are approved methods that use the same measurement technologies against which the ATP method may be linked (i.e., Standard Methods, ASTM, USGS).



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