

FACT SHEET

Final Method for the Determination of Lead in Total Suspended Particulate Matter

ACTION

- On June 26, 2013, the U.S. Environmental Protection Agency (EPA) issued a final rule establishing a new Federal Reference Method (FRM) for state and local air monitoring agencies to use as one of the approved methods for measuring lead (Pb) in total suspended particulate matter (TSP). The FRM is the definitive method for routinely measuring air pollutants for comparison to the National Ambient Air Quality Standards and also is the standard of comparison for determining equivalence of candidate Federal Equivalent Methods (FEMs).
- This new FRM will support collection of Pb concentrations in the air for comparison to the national air quality standards for lead set in 2008. The new FRM is based on heated ultrasonic and hot block extraction methods and Inductively Coupled Plasma-Mass Spectrometry (ICP-MS). The new method also allows for the use of glass fiber, polytetrafluoroethylene (PTFE), or quartz filter media for the collection of Pb in TSP. Only glass fiber filters were allowed for use in the past.
- EPA is making the existing FRM for monitoring airborne Pb, which is based on Flame Atomic Absorption Spectroscopy, a new FEM and retaining all other currently designated FEMs. This will avoid any disruption to state and local air monitoring agencies using these methods for Pb air monitoring.

BACKGROUND

- The Clean Air Act requires EPA to set national ambient air quality standards for pollutants considered harmful to public health and the environment. National standards exist for six pollutants: nitrogen dioxide, ozone, particulate matter, carbon monoxide, sulfur dioxide, and Pb.
- On November 12, 2008, EPA substantially strengthened the National Ambient Air Quality Standards for Pb (73 FR 66934). EPA revised the level of the primary (health-based) standard from 1.5 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) of Pb to 0.15 $\mu\text{g}/\text{m}^3$ of Pb measured in TSP and revised the secondary (welfare-based) standard to be identical in all respects to the primary standard.
- To be consistent with the revised Pb air quality standards, in 2008, EPA also revised the performance-based requirements for Pb FEMs in the lead method test procedures (Part 53.33). Specifically, EPA lowered the Pb concentration range at which the FEM comparability testing is conducted to a range of 0.045 to 0.375 $\mu\text{g}/\text{m}^3$ and established a minimum method detection limit at 0.0075 $\mu\text{g}/\text{m}^3$.

- Although the existing FRM is adequate, the new FRM offers advantages over it by addressing the improved measurement sensitivity (detection limits) needed in response to the tightened Pb standards. This rule recognizes advances in measurement technology that have occurred since promulgation of the original FRM in 1978, and takes advantage of improved extraction methods that are now available with improved precision, sample throughput, and extraction efficiency.

FOR MORE INFORMATION

- Interested parties can download the rule from EPA's web site on the Internet under Recent Actions at the following address:
<http://www.epa.gov/airquality/lead/actions.html>.
- Other places to read the final rule and background information (use Docket ID No. EPA-HQ-OAR-2012-0210):
 - **EPA's electronic public docket and comment system** at <http://www.regulations.gov>.
 - **The EPA Docket Center's Public Reading Room** (for hard copies).
 - The Public Reading Room is located at EPA Headquarters, Room Number 3334 in EPA West Building, 1301 Constitution Avenue, NW, Washington,
 - DC. Hours of operation are 8:30 a.m. to 4:30 p.m. eastern standard time, Monday through Friday, excluding federal holidays.
 - You will have to show photo identification, pass through a metal detector, and sign the EPA visitor log. Any materials you bring with you will be processed through an X-ray machine as well. You will be provided a badge that must be visible at all times.
- For further information about this rulemaking, contact Joann Rice at EPA's Office of Air Quality Planning and Standards at (919) 541-3372.