The Scientific Association Dedicated to Analytical Excellence®

news release

For Immediate Release

Contact: Arlene Fox, AOAC
301-924-7077, ext. 143

Standard Developed for Collection of Suspicious Powders; Tighter Coordination Between Federal and Local Officials

GAITHERSBURG, MD, August 7, 2006 – Federal, state, and local agencies have reached consensus on the first validated national standard for collecting, packaging, and transporting samples of visible powders that are suspected of being biological threat agents, such as anthrax. The new standard meets the needs of the first responders to test the powders on site, and the needs of the federal agencies to conduct tests on the same, uncontaminated powder samples for forensic and confirmatory analysis.

The national sample collection procedure was developed and approved by AOAC INTERNATIONAL, which is a worldwide provider and facilitator in the development of analytical standards. The new standard is applicable to nonporous surfaces only and incorporates reference guidance for packaging and transport of suspicious powders to comply with all appropriate federal regulations regarding bio-safety and bio-security.

The development and testing of the standard were supported by the Science & Technology Directorate of the Department of Homeland Security (DHS) in response to a need for a coordinated effort with federal agencies and emergency responders to standardize activities related to anthrax and other biological agent incidents.

"The development of this AOAC/ASTM standard represents an important step towards building consensus between the emergency responder communities and the federal agencies on national standards for responding to possible terrorist attacks," said Bert M. Coursey, Director of DHS Office of Standards. [For reference to ASTM, see last page of release.]

The purpose of the sampling procedure is to have a standard that is accepted and followed by emergency responders for suspicious powder collection in order to reduce exposure risks, reduce the variability associated with sample handling and analysis, and increase the reliability of sampling visible powders from nonporous surfaces.

Emergency responders need to sample a suspicious powder in order to do a presumptive analysis. Federal agencies also need a sufficient quantity of the powder to do confirmatory testing. The new method provides both groups with sufficient powder to

perform their tests in a manner that protects the powder from contamination. Training emergency responders who collect and disseminate the powder is planned.

"The development of a national standard for the collection of suspicious powders is an important step forward," said Chief John Eversole (Ret), Chairman, Hazardous Materials Committee, International Association of Fire Chiefs. "This standard provides a uniform and systematic procedure whereby accurate, presumptive information can be determined by the First Responders and ensure the preservation of sample evidence for confirmatory analysis and criminal prosecution. Our next step must be to broaden the scope to do sampling in other situations."

"This is a major achievement. With this standard, a confidence can exist among all of the partners engaged in the response, testing and investigation of suspected biological agent releases," said David Ladd, Director, Hazardous Materials Emergency Response for the Commonwealth of Massachusetts, Department of Fire Services.

The sample collection standard is a two-step procedure that is performed after an initial risk assessment is conducted and a visible powder is deemed a credible biological threat.

The first step of the procedure, or Method A, covers the bulk collection and packaging of the suspicious visible powders from solid nonporous surfaces. Bulk samples are collected and transported in a manner that permits public health and safety, and law enforcement agencies to obtain uncompromised samples for confirmatory analysis and forensic testing. The second step, or Method B, covers swab sampling of residual suspicious powders for presumptive on-site biological screening.

A study was conducted in March 2006 to validate the reliability of the sampling procedure at the U.S. Army Dugway Proving Ground. The study demonstrated that the sampling procedure can be used by trained emergency responders in simulated emergency conditions to consistently recover samples. The study also proved that sufficient number of *Bacillus anthracis* spores can be detected by emergency responders to make a presumptive, on-site determination even *after* all bulk samples have been collected. The evaluation study was designed to determine the recovery efficacy on seven environmental surface types that included stainless steel, food-grade painted wood, rubber, tile, concrete, finished wood, and plastic.

The study involved six teams, including four National Guard Civil Support Teams, the Navy's Chemical Biological Incidence Response Force (CBIRF) as well as a hazmat team from the Florida Hazard Materials Response Unit. Team members were dressed in Class C personal protective equipment during the entire study so that the efficacy of the sample collection procedure could be tested under as close to real-life conditions as could be attained.

The development of the sample collection standard was a cooperative, interagency effort involving many stakeholder organizations including federal, state, and local governments. Member organizations serving on the AOAC Sampling Standard Task Group included

the federal agencies NIST, CDC, FBI, DOD, EPA, the U.S. Army Dugway Proving Ground, and the DHS Center for Domestic Preparedness (CDP). State and local organizations represented included the New York State Department of Health, State of Florida, International Association of Fire Chiefs, and the U.S. National Guard. Volunteers from ASTM Committee E54 and the AOAC Official Methods Board also provided extensive review and input.

The standard developed by AOAC has been published by ASTM INTERNATIONAL under the title *Standard Practices for Bulk Sample Collection and Swab Sample Collection of Visible Powders Suspected of Being Biological Agents from Nonporous Surfaces, E2458*. It is available by contacting ASTM INTERNATIONAL, 100 Barr Harbor Drive, PO Box C700 West Conshohocken, PA 19428-2959, www.astm.org.

AOAC INTERNATIONAL, located at 481 North Frederick Avenue, Suite 500, Gaithersburg, MD 20877-2417, www.aoac.org, is a worldwide provider and facilitator in the development of analytical standards. AOAC is a 120 year-old not-for-profit scientific association committed to worldwide confidence in analytical results.

###