

ASTM Standards Development

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Overview of ASTM International

Non-profit, non-government organization

Global forum for developing voluntary
consensus standards

Standards for materials, products, systems,
& services

Over 30,000 members; >100 technical
committees



What are ASTM Standards?

Technical documents developed by consensus:

Test methods, specifications, guides, practices, terminology documents

- Includes sampling & analytical methods



(Example of an ASTM standard)

Designation: E 1979–98

Standard Practice for Ultrasonic Extraction of Paint, Dust, Soil, and Air Samples for Subsequent Determination of Lead

1. Scope

1.1 This practice covers an ultrasonic extraction procedure for the extraction of lead from environmental samples of interest in lead abatement and renovation (or related) work, for analytical purposes.

1.2 Environmental matrices of concern here include dry paint films, settled dusts, soils, and air particles.

1.3 Samples subjected to ultrasonic extraction are prepared for subsequent determination of lead by laboratory analytical methods.

1.4 This practice includes, where applicable, descriptions of procedures for sample homogenization and weighing prior to ultrasonic extraction.

Role of ASTM Standards

**Guide product & method design,
development, market access**

- Used by companies, government, research labs
- Eliminates duplicative / competing standards, & redundancy; saves \$
- National & international impact

U.S. Government use of consensus standards

National Technology Transfer Advancement Act of 1995 (NTTAA) *(Public Law 104-113)*

- Directs federal agencies to rely on private voluntary consensus standards
- Instructs agencies to participate in consensus standards development



Balance in developing ASTM standards

Open process ensures balance:

- Producers, Users, General Interest
- All members have equal voice & vote
- Leads to high level of credibility & acceptance

Initiating an ASTM Standard

(1) Members identify need for new standard, or (2) Outside group solicits ASTM

- ASTM facilitates process, and brings stakeholders together in open forum.

- Biannual meetings (North America)

Developing ASTM Standards

Members convey drafts through balloting process.

- Technical work done in subcommittee; main committee has jurisdiction.

→ All negatives must be addressed.

Promulgation of ASTM Standards

1. Published in *Annual Book of ASTM Standards*
2. Standards also available on-line
3. Compendium volumes
 - Standards reviewed every 5 years

ASTM Symposia

Research symposia sponsored by ASTM:

- Forums for open research discussion in support of ASTM standards development

Symposium on Be Sampling & Analysis:

* April 21-22, 2005 in Reno, NV *

Publication: *Journal of ASTM International*



Examples of ASTM standard test methods in I.H.:

Sampling & Analysis for:

Organic vapors

Silica

Metals

Asbestos

Acid gases/vapors

Diesel fumes

ASTM standards for Be sampling & analysis?

Jurisdiction & interest:

- Committee D22 on Air Quality (>300 members; > 90 standards)
- Subcommittee D22.04 on Workplace Atmospheres (50-60 members; > 30 standards)

Standardization of Beryllium analysis (cont'd.)?

Sampling: Workplace air, Surfaces

Analysis: Sample preparation & Analytical measurement techniques

Field vs. Lab: On-site vs. off-site

Proficiency Testing: Through ASTM?

ASTM vs. ISO

ASTM membership open to any & all

ISO membership limited to member countries

ASTM: Individual member has one vote

ISO: Member country has one vote



Summary – ASTM standards development process

- Reaches decisions through the consensus of those affected
- Allows open participation by all affected stakeholders
- Maintains a balance among competing interests
- Facilitates transparency by making information directly available

Summary – ASTM standards development process (cont'd)

- Ensures due process by considering all views and allowing appeals
- Supports flexibility by allowing the use of different approaches
- Encourages timeliness by avoiding administrative delays
- Maximizes coherency by avoiding overlap or conflict



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