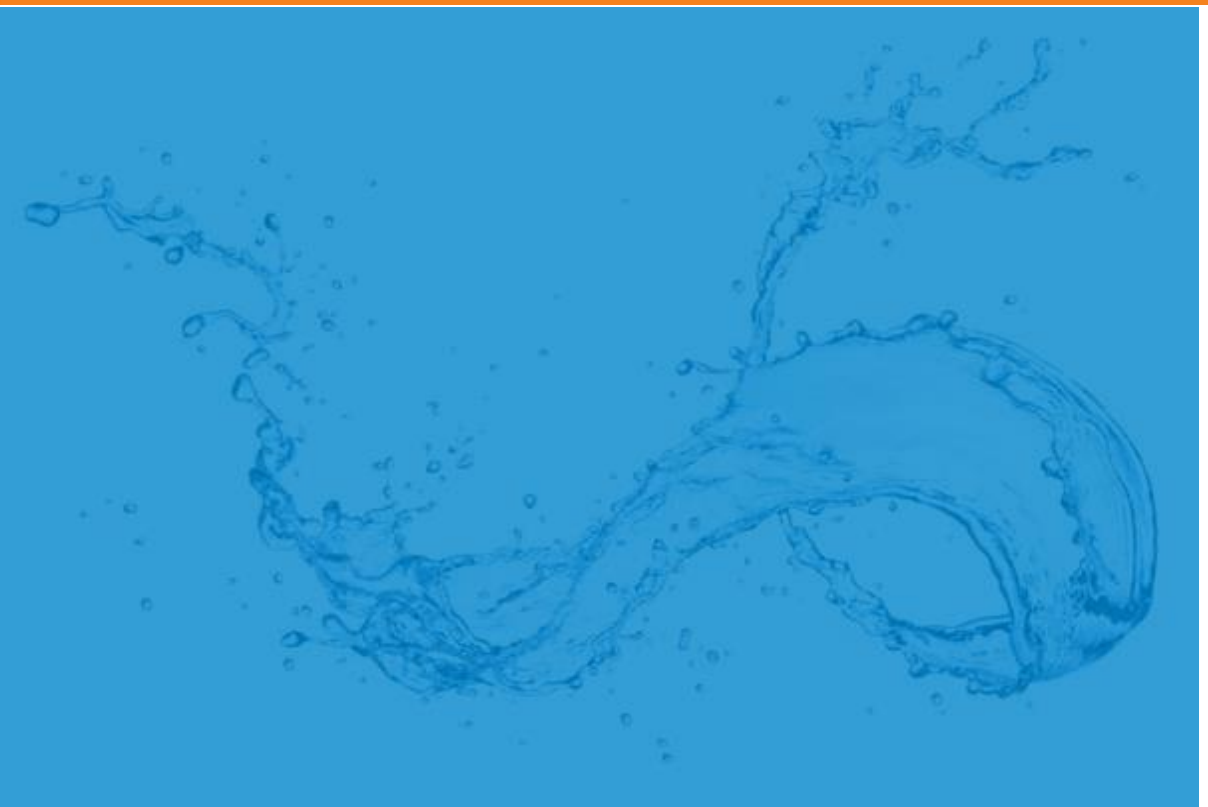
Why Join the American Society of Testing and Materials - A Brief Introduction to Committee D19 on Water

Anne Jurek – ASTM D-19 Secretary



ASTM INTERNATIONAL
Standards Worldwide

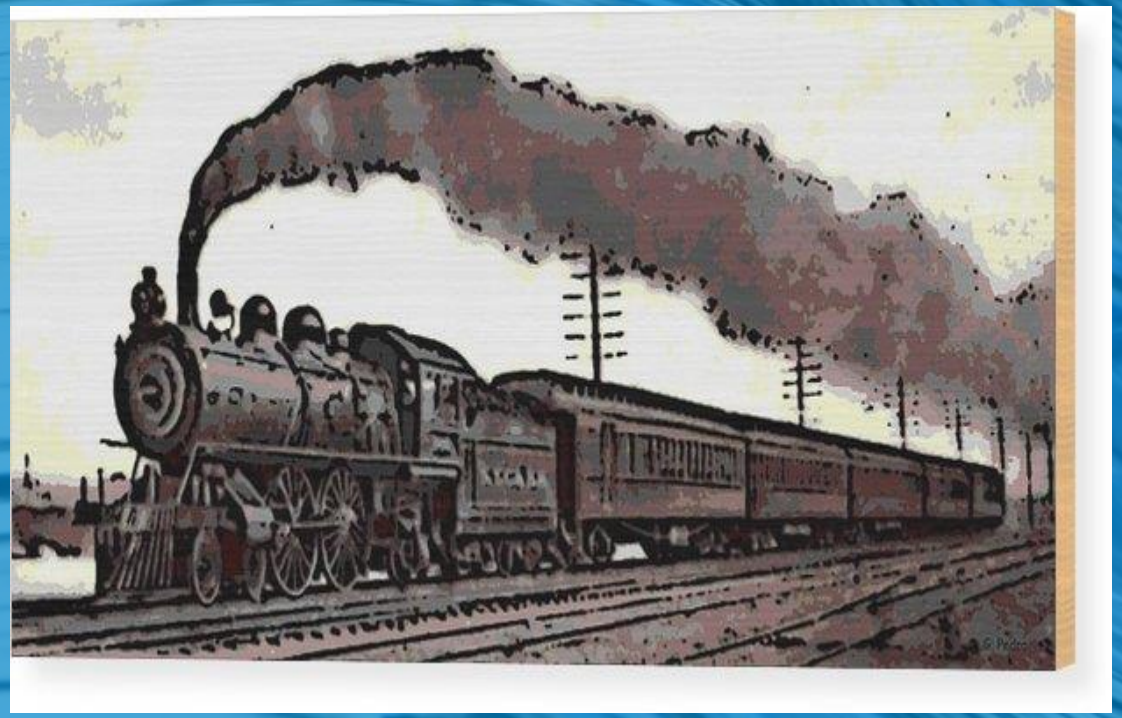
CONTENT OVERVEW

- ASTM History
- ASTM Today
- D19
- Advantages of Joining
- Conclusions

Abstract

The American Society of Testing and Materials (ASTM) was instituted in 1898. It is one of the largest international standards development organizations with over 12,000 standards, 30,000 volunteer members and 140 participating countries. ASTM members are volunteers from all over the world and include some of the world's top business and technical experts. ASTM technical committees have published hundreds of standards that promote the environment. Among these standards are methods on toxicology, atmospheric analysis, waste management, and water. Members have the advantage of gaining knowledge and input into new consensus standards. Furthermore, with technology always evolving, ASTM provides the opportunity for newer methods to keep up with the latest innovations.

Industrial Revolution



- The industrial revolution was the impetus for standards creation
- Steel for railroads and locomotive engines had quality requirements that needed to be met in order to build their products
- Manufacturers started to send detailed descriptions of their materials in order to ensure the materials met customer needs

Dr. Charles Dudley

- Most construction and metallurgy suppliers did not want to adhere to standards, fearing defaults on customer contracts
- The Pennsylvania railroad played a key role in standard specification requests
- Dr. Charles Dudley was a chemist for the Pennsylvania railroad and was in charge of testing paint, oil, steel and other materials that the railroad needed
- Dr. Dudley furnished material specifications for the railroad suppliers
- Steel manufacturers did not like being told how to produce their products and developed a take it or leave it attitude

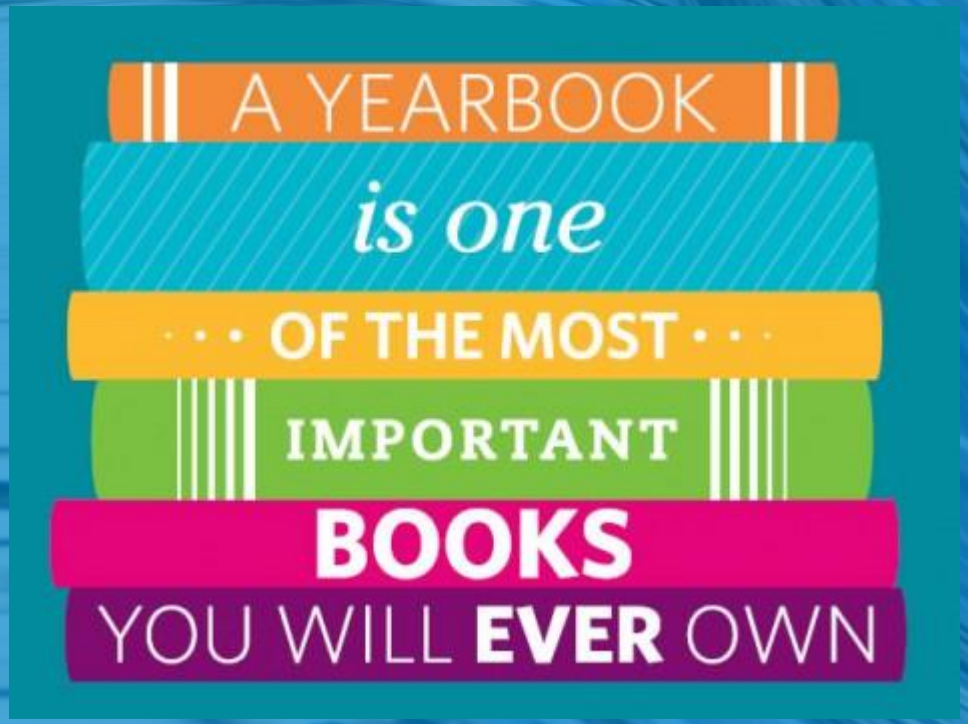
Consensus is Born

- In order to get producers to adhere to quality requirements led to the formation of ASTM's first Committee. A-1 on Steel
- Dudley wanted producers and users to work together on technical committees in order to provide a consensus from the producers and the customers
- These ideas later were used to form today's committee structure

ASTM By-Laws for the A-1 Committee

The organization dedicated itself to "the development and unification of standard methods of testing; the examination of technically important properties of materials of construction and other materials of practical value, and also to the perfection of apparatus used for this purpose."

New Committees



- After the turn of the century, new committees were formed
- C-1 on Cement, Lime and Clay played a key role in standardizing test methods for concrete and cement
- In 1910, a “yearbook” was published annually with all of the ASTM methods and newly revised methods available to all of the ASTM members
- After WWI, there was a new need for consensus standards as areas of industry grew

ASTM Today

30,000
members worldwide

90,000
customers worldwide

Manufacturers

Labs

Governments

Service Providers

Academia

Consumers

ASTM Mission

Committed to serving global societal needs, ASTM International positively impacts public health and safety, consumer confidence, and overall quality of life. We integrate consensus standards – developed with our international membership of volunteer technical experts – and innovative services to improve lives….**Helping our world work better**

Five Strategic Objectives

5

1. Leadership
2. Global Technical Expertise
3. Standards and Technical Content Development
4. Service Provider
5. Organizational Vitality

Leadership

Promote focus on public health and safety, expand leadership position in the standards community and broaden the international use of ASTM products and services

Global Technical Expertise

Attract and retain technical experts from around the world by creating an intellectually and professionally rewarding collaborative environment that meets participant needs and expectations

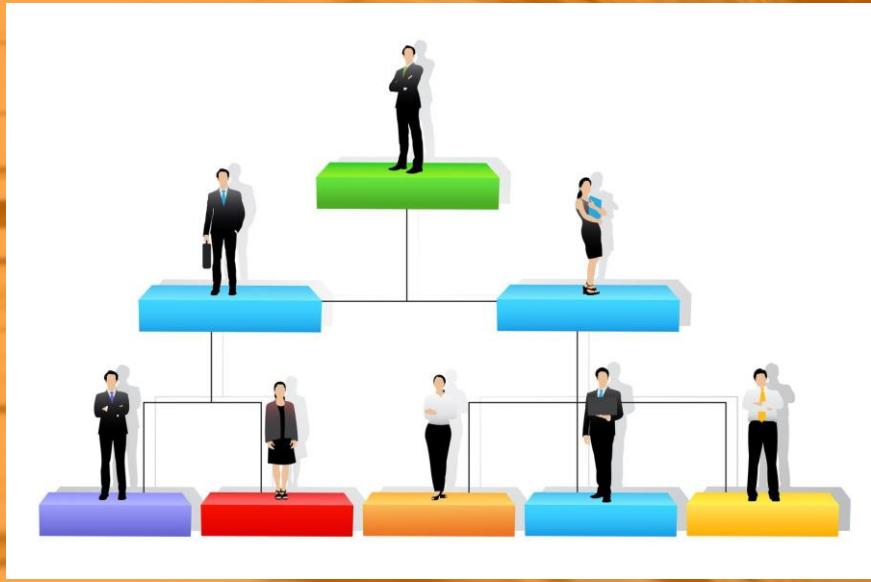
Standards and Technical Content Development

Always be relevant and continuously enhance the technical quality of standards and related content by providing a best-in-class, scalable development infrastructure

Service Provider

Understand global and societal needs and service stakeholders through the integration of innovative products and services

Organizational Vitality



Provide an organizational culture of service and innovation with the appropriate resources to achieve ASTM's mission – positioned to respond to the changing environment

ASTM Committees

- There are over 150 committees with new committees being formed as needed. For example, there is now a cannabis committee
- Each technical committee develops and maintains ASTM methods within the scope of the committee

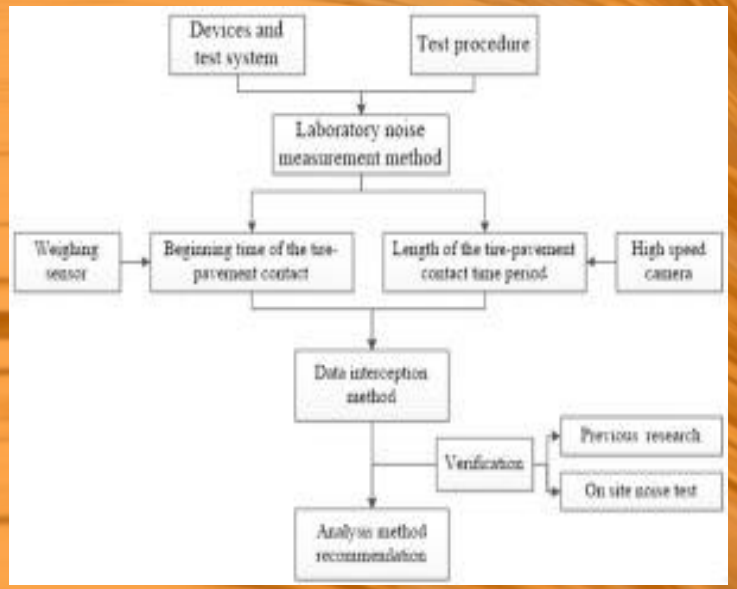
Sub-Committees

- Within each committee there are sub-committees
- The sub-committees are composed of smaller sub sections of the main committee
- Each sub-committee has its own defined scope of work

Six Types of Standards

1. test method
2. specification
3. guide
4. practice
5. classification
6. terminology

Test Method



ASTM Definition: a definitive procedure that produces a test result.
DISCUSSION—Examples of test methods include, but are not limited to: identification, measurement, and evaluation of one or more qualities, characteristics, or properties. A precision and bias statement shall be reported at the end of a test method

Specification

ASTM Definition: an explicit set of requirements to be satisfied by a material, product, system, or service. DISCUSSION—Examples of specifications include, but are not limited to, requirements for; physical, mechanical, or chemical properties, and safety, quality, or performance criteria.

Guide

ASTM Definition: a compendium of information or series of options that does not recommend a specific course of action.

DISCUSSION—A guide increases the awareness of information and approaches in a given subject area.

Practice

ASTM Definition: a definitive set of instructions for performing one or more specific operations that does not produce a test result.

DISCUSSION—Examples of practices include, but are not limited to: application, assessment, cleaning, collection, decontamination, inspection, installation, preparation, sampling, screening, and training.

Classification

ASTM Definition: a systematic arrangement or division of materials, products, systems, or services into groups based on similar characteristics such as origin, composition, properties, or use.

Terminology


final syl
derivation).
ter·mi·nol·ogy /
(science of the) pr
in a science or
grammatical

ASTM Definition: a document comprising definitions of terms; explanations of symbols, abbreviations, or acronyms

D19 – Committee on Water

ASTM Committee D19 on Water was formed in 1932. D19 meets twice a year, usually in January and June, with approximately 120 members attending over four days of technical meetings and a workshop on relevant topics. The Committee, with current membership of approximately 400 members, currently has jurisdiction of over 290 standards, published in the Annual book of ASTM Standards, Volumes 11.01 and 11.02

D19 Scope

The study of water, the promotion of knowledge thereof, and the standardization of terminology methods for:

- Sampling and analysis of water, waterborne materials, and wastes, water- formed deposits and fluvial sediments,
- Surface-water hydraulics and hydrologic measurements
- Determination of the performance of materials or products used to modify water characteristics
- Determination of the corrosivity or deposit forming properties of water

D19 Sub-Committees

D19.02 Quality Systems, Specification, and Statistics
D19.03 Sampling Water and Water-Formed Deposits, Analysis of Water for Power Generation and Process Use, On-Line Water Analysis, and Surveillance of Water
D19.04 Methods of Radiochemical Analysis
D19.05 Inorganic Constituents in Water
D19.06 Methods for Analysis for Organic Substances in Water
D19.07 Sediments, Geomorphology, and Open-Channel Flow
D19.08 Membranes and Ion Exchange Materials
D19.24 Water Microbiology
D19.90 Executive
D19.90.01 Technical Operations
D19.90.02 Long Range Planning
D19.90.04 ASTM/EPA Coordination
D19.95 U. S. TAG to ISO/TC 147 on Water Quality

D19.02

General Specifications, Technical Resources, and Statistical Methods:

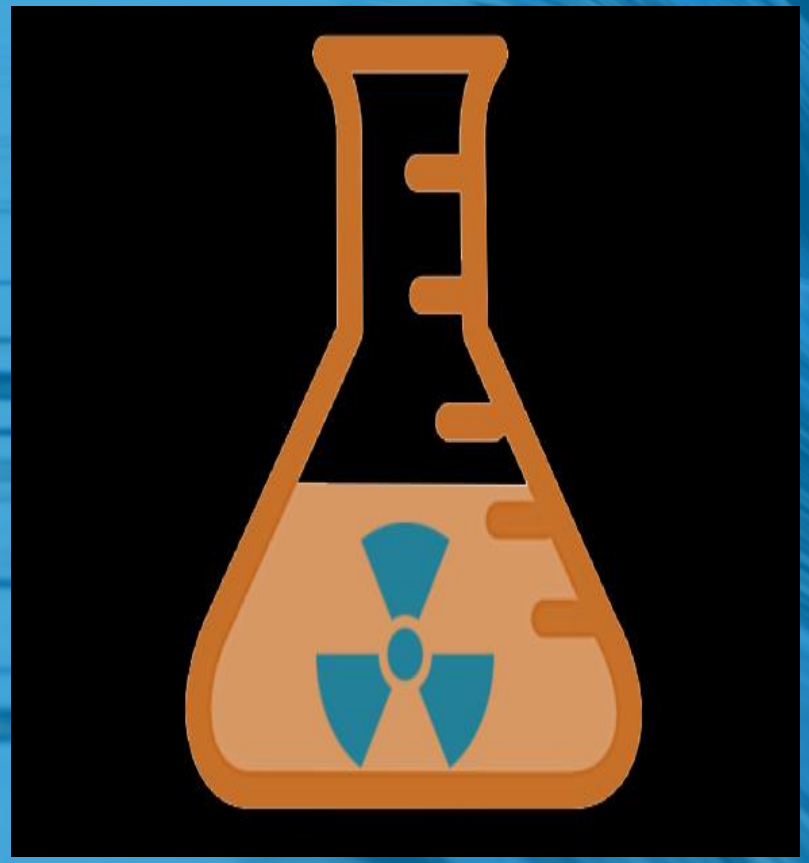
Development of standards for definition of terms, estimation of precision and bias of analytical methods, method validation for general practices for laboratory water monitoring and field activities, analytical laboratory quality assurance and quality control, general specifications for reagent water and other water uses, and general laboratory practices. The development of mathematical and statistical methodology for application in laboratory quality assurance and quality control programs and in describing and detecting changes in the water environment.

D19.03

Sampling Water and Water-Formed Deposits, Analysis of Water for Power Generation and Process Use, On-Line Water Analysis, and Surveillance of Water:

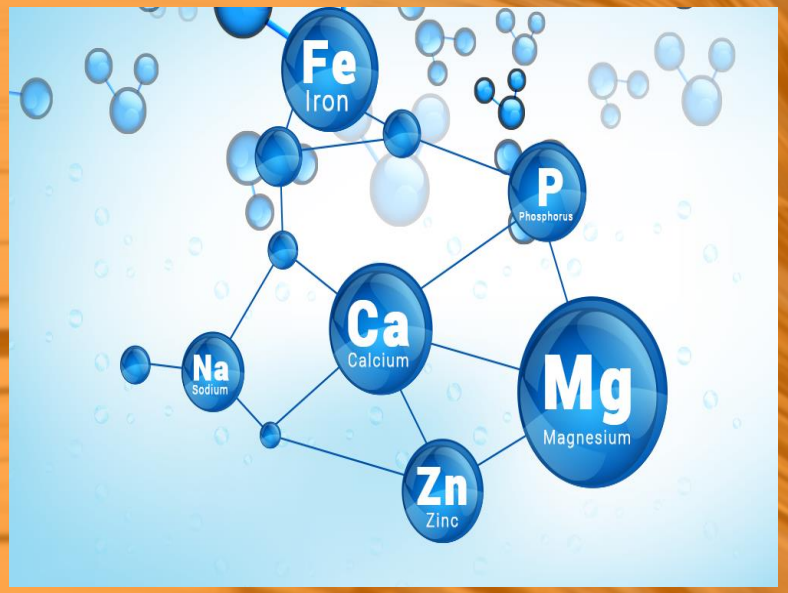
Development of standards for sampling water in its various phases, and for sampling water-formed deposits, for the on-line analysis of water flowing in closed conduits, for the surveillance of water and its interaction with its environment, and development of standards specifically for water for power generation and process use.

D19-04



Methods of Radiochemical Analysis:
Development of standards and practices for determining gross and specific radionuclide concentrations in water, water-formed deposits and other environmental media using chemical and instrumental measurements

D19.05



Inorganic Constituents in Water:

Development of standard methods for testing water for physical properties and inorganic constituents including metals, non-metals, and gases by physical, chemical, and instrumental means.

D19.06

Methods for Analysis for Organic Substances in Water:

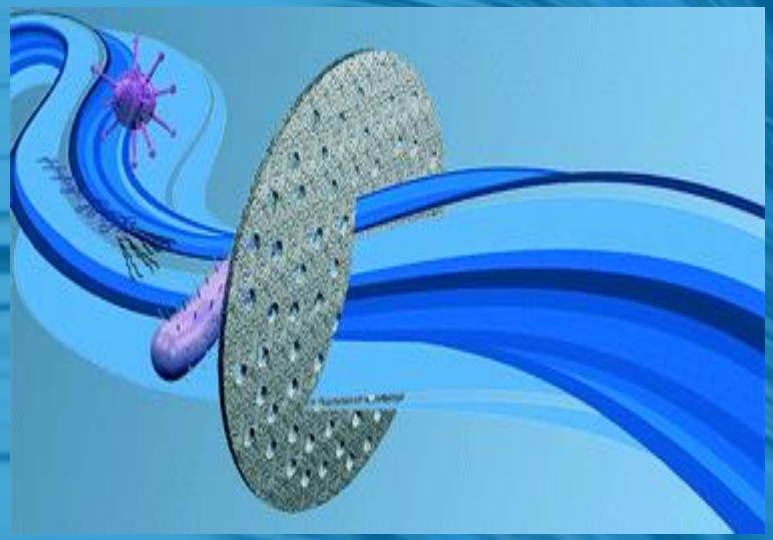
Development of standards for detecting and identifying organic constituents and constituents bound by organics in water by chemical, physical, and instrumental means

D19.07

Sediments, Geomorphology, and Open-Channel Flow:

Development of standards for terminology and methods for sampling, measurement and analysis to determine the physical and chemical aspects of sediments, their impact on water properties, their erodibility, and their depositional characteristics. This includes the morphological characteristics of surface water bodies and measurement of flow in open channels.

D19.08



Membranes and Ion Exchange Materials

Development of standards for and test methods for prediction and evaluation of performance of materials and systems used in treatment of water and (ii) measurement of physical and chemical performance-related properties of membranes and ion-exchange materials.

D19.24

Water Microbiology:

Development of standards for the enumeration of bacteria, fungi, protozoa, human pathogenic viruses and other viruses from water, wastewater, sludge, and sediments and for the estimation microbiological biomass in the above samples, standards using microbes, microbial products and microbial products and microbial activities to assess the presence of chemicals or conditions which enhance or are deleterious in any way to the orderly growth and activities of microbes, and standards for evaluating the metabolic and physiological state of microbes in the natural aquatic environment, in industrial settings and under stressed conditions

D19.90

Executive:

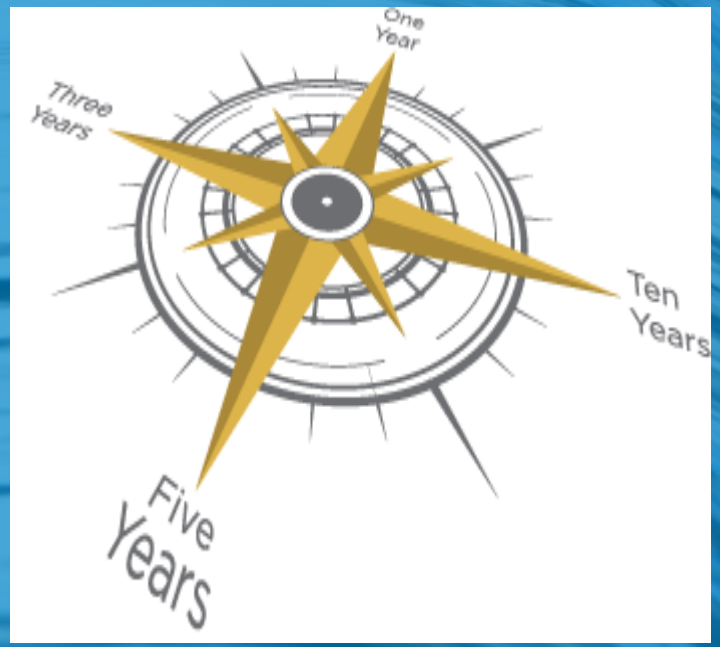
The Executive Subcommittee shall establish technical subcommittees (and sections, if needed) and approve the scope and activities of each. Subcommittees shall work only on such problems as are assigned to them or are authorized by the Executive Subcommittee.

D19-90-01

Technical Operations

Responsible for recommendations concerning the establishment or abolishment of technical subcommittees, the approval of subcommittee scopes and revisions in scopes of established subcommittees, and the initiation or review and approval of ILS study plans. Arbitrates jurisdictional matters between technical subcommittees and coordinate subcommittee plans for technical symposia. Responsible for maintaining the committee bylaws and helps to maintain the "WATER" portion of the Society's Annual Book of Standards. Develops reports to review methods from any committee that may affect D19. Used as a forum to inform fellow members of methods development from any global agency Professional Organizations, Societies, and Trade Associations that may be relevant to D19.

D19.90.02



Long Range Planning

Foresees technological, economic, political, social and other developments that will affect the activities of Committee D-l9; to anticipate the effects of these developments and recommend courses of action; and to oversee the establishment and initial development of new Subcommittees or activities authorized by the Executive Subcommittee on its recommendations. Responsible for working with the ASTM Staff Manager to maintain current public relations of D19 including, the D19 brochure, Fact Sheet, and other D19 information available to the general public.

D19.90.04

ASTM/EPA Coordination:

Monitor federal research and regulatory actions at EPA and other organizations charged with monitoring of water. Coordinate between EPA and other federal, state, or local water agencies to ensure ASTM D19 activities meet the needs of stakeholders. Subcommittee meetings to provide update and foster collaboration are held at committee meetings.

D19.95

U. S. TAG to ISO/TC 147 on Water Quality D19.95

Technical Advisory Group (TAG) to ISO Technical Committee (TC) 147 and is responsible for reviewing and voting on all ISO standards within its scope. The TAG has accepted the responsibilities, including fund-raising, for Participating membership in the main TC 147 activities, and in the following two subcommittees (SC) of TC 147: SC 2 on Physical, Chemical, and Biochemical Methods, and SC 4 on Microbiological Methods. TC 147 meets about every 18 months

Membership Has Its Advantages

- Collaborate with technical experts from around the world.
- Network and form strategic relationships.
- Influence content of standards, new and old.
- Get discounts on all ASTM publications, and
- A free subscription to ASTM Standardization News and ASTM eNEWS.

Committee Officers

- Chair: William C. Lipps
- Vice-chair: Jay C. Gandhi
- Second vice-chair: Richard F. Jack
- Secretary: Anne Jurek
- Membership secretary: Mary McBride
- Staff manager: Brian Milewski
- Admin assistant: Lisa Drennen
- Editor: Emily Moore

ASTM International positively impacts public health and safety, consumer confidence, and overall quality of life. We integrate consensus standards – developed with our international membership of volunteer technical experts that are “helping our world work better”

Conclusions

Thank You

Questions

Information

For more information on ASTM

https://www.astm.org/