



Designation: D2331 – 08 (Reapproved 2022)

# Standard Practices for Preparation and Preliminary Testing of Water-Formed Deposits<sup>1</sup>

This standard is issued under the fixed designation D2331; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 These practices provide directions for the preparation of the sample for analysis, the preliminary examination of the sample, and methods for dissolving the analytical sample or selectively separating constituents of concern.

1.2 The general practices given here can be applied to analysis of samples from a variety of surfaces that are subject to water-formed deposits. However, the investigator must resort to individual experience and judgement in applying these procedures to specific problems.

1.3 The practices include the following:

|                                              | Sections |
|----------------------------------------------|----------|
| Preparation of the Analytical Sample         | 8        |
| Preliminary Testing of the Analytical Sample | 9        |
| Dissolving the Analytical Sample             | 10       |

1.4 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.* For a specific warning statement, see **Note 2**.

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

<sup>1</sup> These practices are under the jurisdiction of ASTM Committee D19 on Water and are the direct responsibility of Subcommittee D19.03 on Sampling Water and Water-Formed Deposits, Analysis of Water for Power Generation and Process Use, On-Line Water Analysis, and Surveillance of Water.

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## 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

- D887 Practices for Sampling Water-Formed Deposits
- D932 Practice for Filamentous Iron Bacteria in Water and Water-Formed Deposits
- D933 Practice for Reporting Results of Examination and Analysis of Water-Formed Deposits
- D934 Practices for Identification of Crystalline Compounds in Water-Formed Deposits By X-Ray Diffraction (Withdrawn 2022)<sup>3</sup>
- D1129 Terminology Relating to Water
- D1193 Specification for Reagent Water
- D1245 Practice for Examination of Water-Formed Deposits by Chemical Microscopy
- D2332 Practice for Analysis of Water-Formed Deposits by Wavelength-Dispersive X-Ray Fluorescence
- E11 Specification for Woven Wire Test Sieve Cloth and Test Sieves

## 3. Terminology

3.1 For definitions of terms used in these practices, refer to Terminology D1129.

## 4. Significance and Use

4.1 Deposits in piping from aqueous process streams serve as an indicator of fouling, corrosion or scaling. Rapid techniques of analysis are useful in identifying the nature of the deposit so that the reason for deposition can be ascertained.

4.2 Possible treatment schemes can be devised to prevent deposition from reoccurring.

4.3 Deposits formed from or by water in all its phases may be further classified as scale, sludge, corrosion products or

<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> The last approved version of this historical standard is referenced on [www.astm.org](http://www.astm.org).