



Designation: D933 – 84 (Reapproved 2012)

Standard Practice for Reporting Results of Examination and Analysis of Water-Formed Deposits¹

This standard is issued under the fixed designation D933; 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 (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice covers the manner in which the results of examination and analysis for inorganic constituents of deposits formed from waters are to be reported.

1.2 While various practices of reporting the analysis of water-formed deposits are in use, this practice is intended as a rational and comprehensive practice for general application. For use in specific industries or individual cases, molecular combinations may be useful and desirable.

1.3 *This standard does not purport to address the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

[D887 Practices for Sampling Water-Formed Deposits](#)

[D1129 Terminology Relating to Water](#)

[E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications](#)

3. Terminology

3.1 *Definitions*—For definitions of terms used in this practice reference should be made to Terminology [D1129](#).

4. Significance and Use

4.1 The results are used to characterize the scale formed and used to evaluate the quality of water used in the unit. Characterizing the scale will assist in the design of the water treatment process to avoid further scale buildup. The use of

modern up-to-date chemical detection units will increase the usefulness of the practice.

5. History of Sample

5.1 Information regarding the source and history of the sample shall be included in the report of the analysis. This information should be that specified in Practices [D887](#), as follows:

5.1.1 Name of individual or company supplying sample,

5.1.2 Geographic origin of sample,

5.1.3 Date and time of sampling,

5.1.4 Number of sample,

5.1.5 Name and other designation of equipment from which sample was removed,

5.1.6 Precise location from which sample was removed (for example, exactly what turbine blade),

5.1.7 Appearance and extent of deposit prior to removal,

5.1.8 Type of deposit—whether scale, sludge, biological deposit, or corrosion product as defined in Practices [D887](#),

5.1.9 Exact method that was used in removing the sample and notes concerning any contamination that might have occurred during the process,

5.1.10 Operating temperature and pressure of liquid or vapor in the equipment that contained the deposit,

5.1.11 Type of treatment applied to the water that formed the deposit or to the water that furnished steam to the affected zone,

5.1.12 An account of discrepancies in operating condition that may have contributed to deposition (for example, water starving),

5.1.13 Results of field tests made on the sample or related equipment, and

5.1.14 Signature of sampler.

6. Physical Characteristics

6.1 The report shall include a description of the physical characteristics of the sample, including any peculiarities that may be pertinent in its further examination.

6.2 Characteristics such as the following may be recorded: color, form, (scaly, slimy, drusy, etc.), texture (oily, smooth,

¹ This practice is under the jurisdiction of ASTM Committee [D19](#) on Water and is 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 For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.