Manual of Petroleum Measurement Standards Chapter 10.1

Standard Test Method for Sediment in Crude Oils and Fuel Oils by the Extraction Method

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Suggested revisions are invited and should be submitted to the Standards Department, API, 200 Massachusetts Avenue, NW, Suite 1100, Washington, DC 20001, standards@api.org.

Contents

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Manual of Petroleum Measurement Standards (MPMS), Chapter 10.1

Standard Test Method for Sediment in Crude Oils and Fuel Oils by the Extraction Method[1]

This standard is issued under the fixed designation D473; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope*

1.1 This test method covers the determination of sediment in crude oils and fuel oils by extraction with toluene. The precision applies to a range of sediment levels from 0.01 % to 0.40 % mass, although higher levels may be determined.

NOTE 1—Precision on recycled oils and crankcase oils is unknown and additional testing is required to determine that precision.

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

1.3 *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 specific warning statements, see 6.1.1.6 and 7.1.

1.4 *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.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D4057 Practice for Manual Sampling of Petroleum and Petroleum Products (API *MPMS* Chapter 8.1)
D4175 Terminology Relating to Petroleum Products, Liquid Fuels, and Lubricants
D4177 Practice for Automatic Sampling of Petroleum and Petroleum Products (API *MPMS* Chapter 8.2)
D5854 Practice for Mixing and Handling of Liquid Samples of Petroleum and Petroleum Products (API *MPMS* Chapter 8.3)
E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

2.2 *API Standards:*[3]
Chapter 1 Terms and Definitions Database
Chapter 8.1 Manual Sampling of Petroleum and Petroleum Products (ASTM Practice D4057)
Chapter 8.2 Automatic Sampling of Petroleum and Petroleum Products (ASTM Practice D4177)
Chapter 8.3 Mixing and Handling of Liquid Samples of Petroleum and Petroleum Products (ASTM Practice D5854)

2.3 *ISO Standard:*[4]
5272 Toluene for industrial use—Specifications

3. Terminology

3.1 For definitions of terms used in this standard test method, refer to Terminology D4175 and the API *MPMS* Chapter 1 Terms and Definitions Database.

4. Summary of Test Method

4.1 Extract test portion of a representative oil sample, contained in a refractory thimble, with hot toluene until the residue reaches constant mass. The mass of residue, calculated as a percentage, is reported as *sediment by extraction*.

[1] This test method is under the jurisdiction of ASTM Committee D02 on Petroleum Products, Liquid Fuels, and Lubricants and the API Committee on Petroleum Measurement, and is the direct responsibility of Subcommittee D02.02 /COMQ, the joint ASTM-API Committee on Hydrocarbon Measurement for Custody Transfer (Joint ASTM-API). This test method has been approved by the sponsoring committees and accepted by the Cooperating Societies in accordance with established procedures.

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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.

[3] Available from American Petroleum Institute (API), 1220 L. St., NW, Washington, DC 20005-4070, http://api-ec.api.org.

[4] Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, http://www.ansi.org.

***A Summary of Changes section appears at the end of this standard**