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.

Designation: D5842 – 19

Manual of Petroleum Measurement Standards (MPMS) Chapter 8.4

Standard Practice for Sampling and Handling of Fuels for Volatility Measurement[1]

This standard is issued under the fixed designation D5842; 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 procedures and equipment for obtaining, mixing, and handling representative samples of volatile fuels for the purpose of testing for compliance with the standards set forth for volatility related measurements applicable to light fuels.

1.2 The applicable dry vapor pressure equivalent range of this practice is 13 kPa to 110 kPa (2 psia to 16 psia).

1.3 This practice is applicable to the sampling, mixing, and handling of reformulated fuels including those containing oxygenates. This practice is not applicable to crude oil. For the sampling of crude oil, refer to Practice D4057/API *MPMS* Chapter 8.1, Practice D4177/API *MPMS* Chapter 8.2, and Practice D8009/API *MPMS* Chapter 8.5.

1.4 The values stated in SI units are to be regarded as the standard except in some cases where drawings may show inch-pound measurements, which are customary for that equipment.

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.*

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.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D4057 Practice for Manual Sampling of Petroleum and Petroleum Products (API *MPMS* Chapter 8.1)

D4177 Practice for Automatic Sampling of Petroleum and Petroleum Products (API *MPMS* Chapter 8.2)

D4953 Test Method for Vapor Pressure of Gasoline and Gasoline-Oxygenate Blends (Dry Method)

D5854 Practice for Mixing and Handling of Liquid Samples of Petroleum and Petroleum Products (API *MPMS* Chapter 8.3)

D7717 Practice for Preparing Volumetric Blends of Denatured Fuel Ethanol and Gasoline Blendstocks for Laboratory Analysis

D8009 Practice for Manual Piston Cylinder Sampling for Volatile Crude Oils, Condensates, and Liquid Petroleum Products (API *MPMS* Chapter 8.5)

2.2 *API Standards:*[3]

MPMS Chapter 8.1—Practice for Manual Sampling of Petroleum and Petroleum Products (ASTM Practice D4057)

MPMS Chapter 8.2—Practice for Automatic Sampling of Petroleum and Petroleum Products (ASTM Practice D4177)

MPMS Chapter 8.3—Practice for Mixing and Handling of Liquid Samples of Petroleum and Petroleum Products (ASTM Practice D5854)

MPMS Chapter 8.5—Practice for Manual Piston Cylinder Sampling for Volatile Crude Oils, Condensates, and Liquid Petroleum Products (ASTM Practice D8009)

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *bottom sample, n*—a sample obtained from the material at the bottom of the tank, container, or line at its lowest point.

[1] This practice 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 practice has been approved by the sponsoring committees and accepted by the Cooperating Societies in accordance with established procedures. This practice was issued as a joint ASTM-API standard in 1995.

Current edition approved Nov. 1, 2019. Published December 2019. Originally approved in 1995. Last previous edition approved in 2017 as D5842 – 17. DOI: 10.1520/D5842-19.

[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://www.api.org.

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

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