Manual of Petroleum Measurement Standards Chapter 8.3

Standard Practice for Mixing and Handling of Liquid Samples of Petroleum and Petroleum Products

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Manual of Petroleum Measurement Standards (MPMS), Chapter 8.3

Standard Practice for Mixing and Handling of Liquid Samples of Petroleum and Petroleum Products[1]

This standard is issued under the fixed designation D5854; 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 handling, mixing, and conditioning procedures that are required to ensure that a representative sample of the liquid petroleum or petroleum product is delivered from the primary sample container or container or both into the analytical apparatus or into intermediate containers.

1.2 Appendix X1 details the background information on the development of Table 1 used in performance testing. Appendix X2 provides guidance in the acceptance testing for water in crude oil. Appendix X3 provides a guide for materials of sample containers. Appendix X4 provides a summary of recommended mixing procedures. Appendix X5 provides a flow chart for sample container/mixing system acceptance test.

1.3 For sampling procedures, refer to Practices D4057 (API *MPMS* Chapter 8.1) and D4177 (API *MPMS* Chapter 8.2). Practice D5842 (API *MPMS* Chapter 8.4) covers sampling and handling of light fuels for volatility measurement, and D8009 (API *MPMS* Chapter 8.5).

1.4 It is recommended that the users of this practice perform the tests in Practice D4177 (API *MPMS* Chapter 8.2) before performing the test in this practice.

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]

D3700 Practice for Obtaining LPG Samples Using a Floating Piston Cylinder

D4057 Practice for Manual Sampling of Petroleum and Petroleum Products

D4177 Practice for Automatic Sampling of Petroleum and Petroleum Products

D4306 Practice for Aviation Fuel Sample Containers for Tests Affected by Trace Contamination

D5842 Practice for Sampling and Handling of Fuels for Volatility Measurement

D8009 Practice for Manual Piston Cylinder Sampling for Volatile Crude Oils, Condensates, and Liquid Petroleum Products

2.2 *API Documents:*[3]

Manual of Petroleum Measurement Standards, Chapter 10, Sediment and Water (all sections)

Publication 2003, Protection Against Ignitions Arising Out of Static, Lighting, and Stray Currents

Publication 2026, Safe Descent onto Floating Roofs of Storage Tanks in Petroleum Service

Publication 2217, Guideline for Confined Space Work in the Petroleum Industry

2.3 *Department of Transportation:*[4]

Code of Federal Regulations, Title 49, Section 173

2.4 *Occupational Safety and Health Standards:*[4]

29 Code of Federal Regulations, Subpart Z, "Toxic and Hazardous Substances," Part 1910.1000 and following

[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 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.

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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://www.api.org.

[4] Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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