



Standard Practice for Manual Sampling of Petroleum and Petroleum Products¹

This standard is issued under the fixed designation D 4057; 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 test method has been approved by the sponsoring committees and accepted by the Cooperating Societies in accordance with established procedures. This method was issued as a joint ASTM-API standard in 1981.

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

1. Scope

1.1 This practice covers procedures for manually obtaining representative samples of petroleum products of a liquid, semi-liquid, or solid state whose vapor pressure at ambient conditions is below 101 kPa (14.7 psia). If sampling is for the precise determination of volatility, use Practice D 5842 in conjunction with this practice. For sample mixing and handling of samples, refer to Practice D 5854. The practice does not cover sampling of electrical insulating oils and hydraulic fluids. A summary of the manual sampling procedures and their applications is presented in Table 1.

NOTE 1—The procedures described in this method may also be applicable in sampling most noncorrosive liquid industrial chemicals, provided that all safety precautions specific to these chemicals are strictly followed.

NOTE 2—The procedure for sampling liquified petroleum gases is described in Practice D 1265; the procedure for sampling fluid power hydraulic fluids is covered in ANSI B93.19 and B93.44; the procedure for sampling insulating oils is described in Practice D 923; and the procedure for sampling natural gas is described in Test Method D 1145.

NOTE 3—The procedure for special fuel samples for trace metal analysis is described in an appendix to Specification D 2880.

2. Referenced Documents

2.1 ASTM Standards:

- D 86 Test Method for Distillation of Petroleum Products at Atmospheric Pressure²
- D 217 Test Methods for Cone Penetration of Lubricating Grease²
- D 244 Test Methods for Emulsified Asphalts³
- D 268 Guide for Sampling and Testing Volatile Solvents and Chemical Intermediates for Use in Paint and Related

Coatings and Materials⁴

- D 323 Test Method for Vapor Pressure of Petroleum Products (Reid Method)²
 - D 346 Practice for Collection and Preparation of Coke Samples for Laboratory Analysis⁵
 - D 525 Test Method for Oxidation Stability of Gasoline (Induction Period Method)²
 - D 873 Test Method for Oxidation Stability of Aviation Fuels (Potential Residue Method)²
 - D 923 Test Method for Sampling Electrical Insulating Liquids⁶
 - D 977 Specification for Emulsified Asphalt³
 - D 1145 Test Method for Sampling Natural Gas⁷
 - D 1265 Practice for Sampling Liquefied Petroleum (LP) Gases—Manual Method²
 - D 1856 Test Method for Recovery of Asphalt from Solution by Abson Method³
 - D 2172 Test Methods for Quantitative Extraction of Bitumen from Bituminous Paving Mixtures³
 - D 2880 Specification for Gas Turbine Fuel Oils²
 - D 4177 Practice for Automatic Sampling of Petroleum and Petroleum Products⁸
 - D 4306 Practice for Aviation Fuel Sample Containers for Tests Affected by Trace Contamination⁸
 - D 5842 Practice for Mixing and Handling of Liquids of Petroleum and Petroleum Products⁹
 - D 5854 Practice for Mixing and Handling of Fuels for Volatility Measurements⁹
- #### 2.2 American National Standards:¹⁰
- B93.19 Standard Method for Extraction Fluid Samples from

¹ This practice is under the jurisdiction of ASTM Committee D02 on Petroleum Products and Lubricants and is the direct responsibility of Subcommittee D02.02 on Static Petroleum Measurement (Joint ASTM-API).

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² Annual Book of ASTM Standards, Vol 05.01.

³ Annual Book of ASTM Standards, Vol 04.03.

⁴ Annual Book of ASTM Standards, Vol 06.04.

⁵ Annual Book of ASTM Standards, Vol 05.06.

⁶ Annual Book of ASTM Standards, Vol 10.03.

⁷ Discontinued; see 1987 Annual Book of ASTM Standards, Vol 05.05.

⁸ Annual Book of ASTM Standards, Vol 05.02.

⁹ Annual Book of ASTM Standards, Vol 05.03.

¹⁰ Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.