



Designation: D5761 – 24

Standard Practice for Emulsification/Suspension of Multiphase Fluid Waste Materials¹

This standard is issued under the fixed designation D5761; 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 generation of a uniform mixture or emulsion from multiphase samples which are primarily liquid in order to facilitate sample preparation, transfer, and analysis.

1.2 This practice is designed to keep a multiphase fluid sample in an emulsified/suspended state long enough to take a single, composite sample that is representative of the sample as a whole. The sample may reform multiple layers after standing.

1.3 The emulsion/suspension generated by following this practice can be used only for analytical procedures designed for the total sample and procedures not significantly affected by the emulsifier or the presence of an emulsion/suspension.

1.4 This practice assumes that a representative sample of not more than 1 L has been obtained.

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

1.6 *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.*

1.7 *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.*

¹ This practice is under the jurisdiction of ASTM Committee D02 on Petroleum Products, Liquid Fuels, and Lubricants and is the direct responsibility of Subcommittee D02.03 on Elemental Analysis.

Current edition approved July 1, 2024. Published August 2024. Originally approved in 1995. Last previous edition approved in 2023 as D5761 – 23. DOI: 10.1520/D5761-24.

2. Referenced Documents

2.1 *ASTM Standards*:²

D4057 Practice for Manual Sampling of Petroleum and Petroleum Products

D4175 Terminology Relating to Petroleum Products, Liquid Fuels, and Lubricants

D4177 Practice for Automatic Sampling of Petroleum and Petroleum Products

2.2 *EPA Standard*:

SW846 Test Methods for Evaluating Solid Waste, Physical/Chemical Methods³

3. Terminology

3.1 *Definitions*:

3.1.1 For definitions of terms used in this practice, refer to Terminology D4175.

3.2 *Definitions of Terms Specific to This Standard*:

3.2.1 *emulsifier, n*—a substance which when added to a multiphase mixture aids in the stabilization of an emulsion of the phases.

3.2.2 *multiphase fluid waste material, n*—a substance or mixture of chemicals that is no longer useful for its original purpose that visibly involves a solid and at least one liquid phase or more than one liquid phase without any solid present.

4. Summary of Practice

4.1 An emulsifier is added and mixed well with a sample of multiphase fluid waste material, to produce a uniform mixture suitable for subsequent aliquoting. A satisfactory homogenization has been attained when the sample appears to remain as a single phase for 30 s or longer.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at www.astm.org/contact. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from United States Environmental Protection Agency (EPA), William Jefferson Clinton Bldg., 1200 Pennsylvania Ave., NW, Washington, DC 20460, <http://www.epa.gov>.

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