



Standard Practice for Sampling of Tanks by Field Personnel¹

This standard is issued under the fixed designation D7831; 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 information for field personnel to follow in order to collect samples from tanks.

1.2 The purpose of this practice is to help field personnel in planning and obtaining samples from vertical and horizontal tanks, open-topped rectangular/square tanks, railroad and truck tankers, vacuum trucks and tanks with multiple compartments using equipment and techniques that will assist in meeting the sampling objectives.

1.3 The practice is applicable to hazardous materials, products, raw materials, by-product, or waste.

1.4 Sampling from circulating pump discharge valves and tank transfer lines are not addressed in this practice.

1.5 *Units*—The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered 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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards*:²

D4687 Guide for General Planning of Waste Sampling

D4840 Guide for Sample Chain-of-Custody Procedures

D5088 Practice for Decontamination of Field Equipment Used at Waste Sites

D5283 Practice for Generation of Environmental Data Related to Waste Management Activities: Quality Assurance and Quality Control Planning and Implementation

D5495 Practice for Sampling With a Composite Liquid

Waste Sampler (COLIWASA)

D5681 Terminology for Waste and Waste Management

D5792 Practice for Generation of Environmental Data Related to Waste Management Activities: Development of Data Quality Objectives

D6232 Guide for Selection of Sampling Equipment for Waste and Contaminated Media Data Collection Activities

D6759 Practice for Sampling Liquids Using Grab and Discrete Depth Samplers

D7353 Practice for Sampling of Liquids in Waste Management Activities Using a Peristaltic Pump

3. Terminology

3.1 *Definitions*:

3.1.1 For definitions of terms used in this guide, refer to Terminology D5681.

3.1.2 *tank, n*—stationary device designed to contain an accumulated material that is constructed of non-earthen materials that provide structural support.

3.1.2.1 *Discussion*—It may be appropriate to consider various containers (portable devices), such as roll offs, tanker trucks, and rail tank cars, as tanks for sampling purposes, even if they meet a regulatory definition of a container.

4. Summary of Practice

4.1 This practice addresses sampling planning including pre-sampling and site inspections.

4.2 This practice lists some of the factors that should be considered when collecting tank content samples.

4.3 Sampling procedures for the equipment needed to sample vertical and horizontal tanks, open-topped rectangular/square tanks, railroad and truck tankers, vacuum trucks and tanks with multiple compartments are presented.

4.4 Sampling procedures to sample single and stratified materials and wastes are addressed.

4.5 It is not intended to cover all equipment that might be purchased or custom made, nor does the guide address every sampling situation that is encountered in the field.

5. Significance and Use

5.1 This practice is intended to assist field personnel in obtaining samples from tanks for laboratory analysis. The cost

¹ This practice is under the jurisdiction of ASTM Committee D34 on Waste Management and is the direct responsibility of Subcommittee D34.01.02 on Sampling Techniques.

Current edition approved April 1, 2013. Published May 2013. DOI: 10.1520/D7831-13.

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.