



Designation: **D7204 – 15 D7204 – 23**

Standard Practice for Sampling Waste Streams on Conveyors¹

This standard is issued under the fixed designation D7204; 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 describes standard procedures for sampling waste on open and closed conveying systems and is applicable to any waste material that can be conveyed to a waste pile or container. The conveyor system can be a vertical (vertical lifts), sloped, or horizontal type.

1.2 This practice is intended for particles and slurries, which can be sampled using scoop, dipper, or shovel type samplers.

1.3 The practice is not intended for large size sample constituents, such as boulders, large rocks, and debris.

1.4 *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.*

1.5 *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
- D4547 Guide for Sampling Waste and Soils for Volatile Organic Compounds
 - D4687 Guide for General Planning of Waste Sampling
 - ~~D4916 Practice for Mechanical Auger Sampling (Withdrawn 2008)~~³
 - 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
 - D5633 Practice for Sampling with a Scoop
 - D5658 Practice for Sampling Unconsolidated Waste from Trucks
 - D5680 Practice for Sampling Unconsolidated Solids in Drums or Similar Containers
 - D5681 Terminology for Waste and Waste Management
 - D5792 Practice for Generation of Environmental Data Related to Waste Management Activities: Development of Data Quality Objectives
 - D5956 Guide for Sampling Strategies for Heterogeneous Wastes
 - D6009 Guide for Sampling Waste Piles

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 Sept. 1, 2015; Nov. 1, 2023. Published September 2015; November 2023. Originally approved in 2007. Last previous edition approved in 2007 as D7204 – 07; D7204 – 15. DOI: 10.1520/D7204-15.10.1520/D7204-23.

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.

D6051 Guide for Composite Sampling and Field Subsampling for Environmental Waste Management Activities

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

~~D6250 Practice for Derivation of Decision Point and Confidence Limit for Statistical Testing of Mean Concentration in Waste Management Decisions (Withdrawn 2018)³~~

D6311 Guide for Generation of Environmental Data Related to Waste Management Activities: Selection and Optimization of Sampling Design

3. Terminology

3.1 Definitions:

3.1.1 See also Terminology [D5681](#).

3.1.2 *field records, n*—information written in a field log ~~book or book~~, loose leaf sampling ~~forms~~ forms, or appropriate electronic format at the time of sampling.

4. Significance and Use

4.1 This practice can be used in sampling ash from a kiln or incinerator, soils, and process waste from conveying systems, such as ~~as~~ a conveyor and vertical lifts. Some slurries, such as the bottom solids, can be sampled from the quench waters at the end of a kiln.

4.2 This practice can be used to determine material balances for burner efficiency studies and compliance studies.

4.3 This practice can be used on lifts, sloping, and horizontal conveyor systems. The type of conveyor and the amount and type of sample required will dictate the type of sampling equipment required to get a representative sample.

4.4 The sample is taken directly from the conveyor before emptying into the waste container or pile for disposal or recycling using a scoop, dipper, or shovel depending upon the sample requirements (see Practice [D5633](#)). The sample is then put into the sample container for analysis.

4.5 The place, quantity, frequency, and time of sampling is dependent upon the conveying system equipment, data quality objectives (DQOs) (Practice [D5792](#)), work or sampling plan (See see Practice [D5283](#) and Guide [D4687](#)), and analysis to be run.

4.5.1 Large particles can be mechanically excluded on a belt system. Large particles may accumulate at the bottom of an inclined/sloped belt system. Therefore, steps, if possible, need to be taken so that particles of all sizes have equal chances of being sampled.

4.5.2 The number of samples and sample time is dependent upon the system, the precision required, the decisions that are to be made, the cost, and the degree of heterogeneity of the material (see GuideGuides [D5956](#), ~~Practice~~ [D6250](#), and Guide [D6311](#)).

4.5.3 In general, the ideal sampling location is nearest to the point of generation since temperature, oxidation, and air movement may change some samples with time.

4.6 The practice does not address issues related to the heterogeneity of the sample.

5. Sampling Equipment

5.1 The scoop, dipper, or shovel must be manufactured from material that is compatible with the waste to be ~~sampled~~, sampled and the required test or analysis to be performed (see Guide [D6232](#)).

5.1.1 Sampling equipment must be selected that is chemically compatible with the type of waste and type of ~~analyses~~, analysis. Stainless steel, glass, and plastic are generally acceptable for most samples. Plastic sampling equipment may not be suitable for waste to be analyzed for organic parameters. It is up to the user to ensure that the equipment will not contaminate or bias the ~~analyses~~, analysis.

5.1.2 The reuse of equipment without proper cleaning can result in false positive analysis. If proper equipment cleaning cannot be accomplished in the field, additional sets of sampling equipment are needed to prevent potential cross-contamination.