








ASTM D3987 - 12 

# Standard Practice for Shake Extraction of Solid Waste with Water

Active Standard ASTM D3987 | Developed by Subcommittee: [D34.01.04](#)

Book of Standards Volume: [11.04](#)

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**Significance and Use**

~~Exhibit 4 \$0~~

- 4.1 This practice is intended as a rapid means for obtaining an extract of solid waste. The extract may be used to estimate the release of constituents of the solid waste under the laboratory conditions described in this procedure.
- 4.2 This practice is not intended to provide an extract that is representative of the actual leachate produced from a solid waste in the field or to produce extracts to be used as the sole basis of engineering design.
- 4.3 This practice is not intended to simulate site-specific leaching conditions. It has not been demonstrated to simulate actual disposal site leaching conditions.
- 4.4 The intent of this practice is that the final pH of the extract reflects the interaction of the extractant with the buffering capacity of the solid waste.
- 4.5 The intent of this practice is that the water extraction simulates conditions where the solid waste is the dominant factor in determining the pH of the extract.
- 4.6 The practice produces an extract that is amenable to the determination of both major and minor constituents. When minor constituents are being determined, it is especially important that precautions are taken in sample storage and handling to avoid possible contamination of the samples.
- 4.7 The practice has not been tested for applicability to organic substances and volatile matter.

## 1. Scope

- 1.1 This practice covers a procedure for leaching of solid waste to obtain an aqueous solution to be used to determine the constituents leached under the specified testing conditions.
- 1.2 This practice provides for the shaking of a known mass of waste with water of specified composition and the separation of the aqueous phase for analysis.
- 1.3 The values stated in SI units are to be regarded as standard. Values given in parentheses are mathematical conversions to inch-pound units that are provided for information only and are not considered standard.
- 1.4 *This standard does not purport to address all of the safety problems, 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 *(purchase separately)* ⓘ

### ASTM Standards

C471M Test Methods for Chemical Analysis of Gypsum and Gypsum Products (Metric)

D75 Practice for Sampling Aggregates

D420 Guide to Site Characterization for Engineering Design and Construction Purposes

D1193 Specification for Reagent Water

D2216 Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass

D2234/D2234M Practice for Collection of a Gross Sample of Coal

D3370 Practices for Sampling Water from Closed Conduits

D5681 Terminology for Waste and Waste Management

E122 Practice for Calculating Sample Size to Estimate, With Specified Precision, the Average for a Characteristic of a Lot or Process

### Keywords

Extraction - Leaching - Solid Waste - Waste - Water

### ICS Code

ICS Number Code 13.060.50 (Examination of water for chemical substances)

### UNSPSC Code

UNSPSC Code 77100000(Environmental management)

## Referencing This Standard

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