



Designation: E 1183 – 87 (Reapproved 1996)

## Standard Test Method for Air Drying RDF-5 for Further Analysis<sup>1</sup>

This standard is issued under the fixed designation E 1183; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This test method covers the process of air drying a gross or laboratory sample of RDF-5. The air dry loss is determined by air drying on a drying floor.

1.2 The values given in SI units are to be regarded as the standard. The values in parentheses are for information only.

1.3 *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.* For specific precautionary statements, see Section 5.

### 2. Terminology

2.1 *RDF-5*—solid fuel derived from municipal solid waste in which the processed combustible fraction is densified (compressed) into the form of pellets, cubettes or briquettes.

### 3. Significance and Use

3.1 Air drying is performed on a gross sample if it cannot be handled without loss of moisture. A laboratory sample is air dried in order to yield a RDF-5 sample with moisture content near to equilibrium with the atmosphere. Such equilibrium is necessary to ensure uniform conditions throughout subsequent analysis of the RDF-5 laboratory sample for density, size distribution, hydrophilia, breakage, and similar tests. The test is not applicable if the sample is to be tested for total moisture.

### 4. Apparatus

4.1 *Drying Floor*, a smooth, clean floor area in a room free of contamination by dust or other material and that permits air circulation without excessive heat or air currents.

4.2 *Drying Pans*, clean, dry, non-corroding pans used to contain the sample during the drying process.

4.3 *Balance or Scale*, a device capable of weighing the sample and container with a sensitivity of 0.1 g in 1000 g (0.0002 lb in 2.2 lb.)

4.4 *Glass Stirring Rod*, a clean, smooth glass rod used to stir the sample to facilitate drying.

4.5 *Shovel*, used to stir the sample to facilitate drying.

### 5. Precautions

5.1 All operations shall be done rapidly and in as few operations as possible because moisture loss depends on several factors other than total moisture content, such as atmospheric temperature and humidity.

5.2 At all times RDF-5 samples should be protected from moisture change due to exposure to rain, snow, wind, and sun or contact with absorbant materials.

5.3 Samples should be transported to the laboratory and analyzed as soon as possible. If any sample handling step involves an extended time period, the sample and container should be weighed before and after the process to determine any weight gain or loss. This weight gain or loss shall be included in the calculation of moisture content.

### 6. Procedure

6.1 Weigh the sample to the nearest 0.5 g (0.001 lb). Spread the sample on the drying floor to a depth of not more than 15 cm (6 in.). Mix or stir the RDF-5 with a shovel from time to time, being careful not to lose or break particles.

6.1.1 Continue air drying and mixing until the surface of the sample appears dry. Weigh the entire sample and redistribute over the floor for further drying. Continue the drying, mixing, and weighing until the weight loss of the total sample is  $\leq 0.1$  %/h. Refrain from excessive drying and rough handling of the RDF-5 in order to avoid particle breakage.

### 7. Report

7.1 This test method does not yield a numerical quantity that is reported.

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee D-34 on Waste Management and is the direct responsibility of Subcommittee D34.06 on Recovery and Reuse.

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