



## Standard Test Methods for Flammability Potential Screening Analysis of Waste<sup>1</sup>

This standard is issued under the fixed designation D 4982; 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 These test methods are used to indicate the fire-producing or fire-sustaining potential of wastes. The following test methods can be applied to waste liquids, sludges, or solids:

|                                                     | Sections  |
|-----------------------------------------------------|-----------|
| Test Method A—Test Sample Exposed to Heat and Flame | 7-9       |
| Test Method B—Test Sample Exposed to Spark Source   | 10 and 11 |

1.2 These test methods should be used to measure and describe the properties of materials, in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials under actual fire conditions. However, results of these tests may be used in addition to all other factors that are pertinent to a fire hazard assessment of a particular end use.

1.3 These test methods are designed and intended as preliminary tests to complement quantitative analytical techniques that may be used to determine flammability. These test methods offer the option and the ability to screen waste for hazardous flammability potential when the analytical techniques are not available or the total waste composition is unknown.

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.* Specific hazard information is given in Section 5 and Note 2.

### 2. Terminology

#### 2.1 Definitions of Terms Specific to This Standard:

2.1.1 *screening analysis*—a preliminary qualitative or semi-quantitative test that is designed to efficiently give the user specific information about a waste that will aid in determining waste identification, process compatibility, and safety in handling.

### 3. Summary of Test Methods

3.1 *Method A*—A test sample is exposed to heat and flame. The sample is reported as having a positive or negative flammability potential as described in the test procedure.

3.2 *Method B*—Sparks from a flint lighter are introduced to

the vapor space immediately above a representative sample of a waste, and observation is made for a flash in the vapor space or ignition of the sample. A flash in the vapor space or ignition and burning of the waste indicates a positive flammability potential at ambient temperature.

### 4. Significance and Use

4.1 These test methods are intended for use by those in the waste management industries to aid in identifying the flammability potential or waste materials.

### 5. Hazards

5.1 Avoid inhalation and skin or eye contact, or both, of any hazardous materials.

5.2 Standard laboratory hygiene practices should be followed when conducting these tests.

5.3 All tests must be performed in a laboratory hood.

5.4 Waste containing or suspected of containing highly volatile organics or peroxides should be tested using a much smaller sample than that used in 9.2.

5.5 The aluminum weighing boat should be placed on an inert, nonflammable surface.

### 6. Sampling

6.1 Sample containers must be kept tightly sealed until tested.

6.2 Samples should be analyzed as soon as possible after collection.

6.3 If necessary, allow the sample to come to room temperature in a tightly sealed container. For example, frozen material should be allowed to thaw completely.

### TEST METHOD A—EXPOSURE TO HEAT AND FLAME

### 7. Interferences

7.1 Drafts in the laboratory fume hood where the test is performed could cause excessive cooling and false negative results. A properly operating fume hood with a face velocity of 100 ft/min should provide consistent, usable results.

7.2 Ignition sources that provide excessive heating rates alone or combined with a very small test portion may obscure results. That is, the sample may be decomposed, sintered, fused, evaporated, or otherwise consumed before positive or negative evidence of flammability is observed. The use of sufficiently large test portions and of heating rates typical of a

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