Designation: D5232 – 19

Standard Practice for Determining the Stability and Miscibility of a Solid, Semi-Solid, or Liquid Waste Material[1]

This standard is issued under the fixed designation D5232; 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 is designed to determine whether a waste material reacts when it is mixed with air, water, strong acid, strong base, an oil/solvent mixture, other waste mixtures, or solid media such as a geological formation or solidification agents.

1.2 The miscibility of the waste material with the above media can also be defined.

NOTE 1—The following ASTM standards provide supplemental information: Test Methods D4978, D4980, D4982, D5049, and D5057 and Practices D4979, D4981, and D5058.

1.3 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.* For specific hazard statements, see Section 8.

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]

D1193 Specification for Reagent Water

D4978 Test Methods for Screening of Reactive Sulfides in Waste

D4979 Practice for Physical Description Screening Analysis in Waste

D4980 Test Methods for Screening of pH in Waste (Withdrawn 2009)[3]

D4981 Practice for Screening of Oxidizers in Waste

D4982 Test Methods for Flammability Potential Screening Analysis of Waste

D5049 Test Method for Screening Cyanides In Waste (Withdrawn 1999)[3]

D5057 Test Method for Screening Apparent Specific Gravity and Bulk Density of Waste

D5058 Practices for Compatibility of Screening Analysis of Waste

D5681 Terminology for Waste and Waste Management

3. Terminology

3.1 Definitions of terms in this practice appear in Terminology D5681.

4. Summary of Practice

4.1 The stability and miscibility of a waste material are observed when the waste is mixed with various media.

5. Significance and Use

5.1 This practice will identify waste materials that are potentially unstable when they come in contact with other materials at a waste treatment or disposal site.

5.2 This practice will serve to determine the miscibility of waste materials with various media, including other wastes.

5.3 This practice may not be applicable to all wastes. The appropriateness of these tests depends upon the proposed management of the waste.

5.4 Since the initiation of some chemical reactions are slow to take place, the user may wish to establish reagent-to-waste contact times prior to observing the mixes for any reactions.

6. Apparatus and Materials

6.1 *Disposable Cups,* minimum 40-mL total volume. Select plastics or other materials compatible with the reagents involved.

[1] This practice is under the jurisdiction of ASTM Committee D34 on Waste Management and is the direct responsibility of Subcommittee D34.01.06 on Analytical Methods.

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[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.

[3] The last approved version of this historical standard is referenced on www.astm.org.