



Designation: ~~D6050-97 (Reapproved 2003)~~^{ε1} Designation: D 6050 – 09

Standard Test Method for Determination of Insoluble Solids in Organic Liquid Hazardous Waste¹

This standard is issued under the fixed designation D 6050; 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.

~~^{ε1}Note—Equations 1 and 2 were corrected editorially in June 2003.~~

1. Scope

1.1 This test method covers the determination of the approximate amount of insoluble, suspended solid material in organic liquid hazardous waste (OLHW).

1.2 This test method is intended to be used in approximating the amount of insoluble, suspended solids in determining the material handling characteristics and fuel quality of OLHW. It is not intended to replace more sophisticated procedures for the determination of total solids.

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.*

2. Referenced Documents

2.1 *ASTM Standards:*

D 96 [Test Methods Method for Water and Sediment in Crude Oil by Centrifuge Method \(Field Procedure\)](#)²

3. Summary of Test Method

3.1 A 10-mL aliquot of OLHW sample is decanted into a 15-mL graduated centrifuge tube and centrifuged for 3 min. The separated liquid phase of the OLHW is decanted into an appropriate waste vessel. The centrifuge tube with the separated solid material is brought back to its original 10-mL volume with a user-selected blend of clean solvents and agitated to mix the solid and liquid phases. The tube is centrifuged for 2 min, and the amount of remaining solid material is read.

4. Significance and Use

~~4.1 Facilities utilizing bulk liquid hazardous waste fuels are concerned about material handling characteristics and the overall quality of the fuel. A high percentage of insoluble, suspended solid material can create pumping, filtering, or grinding difficulties in the off-loading of bulk shipments of OLHW and can contribute to excessive wear on processing equipment. High solids can also decrease the quality and consistency of commingled fuel by decreasing the effectiveness of agitation in storage tanks.~~

4.1 A high percentage of insoluble, suspended solid material can create pumping, filtering, or grinding difficulties in the off-loading of bulk shipments of OLHW and can contribute to excessive wear on processing equipment. High solids can also decrease the quality and consistency of commingled solutions by decreasing the effectiveness of agitation in storage tanks. These issues are of concern to the recycling industries (solvents, paints, and other materials handled in significant quantities) in addition to those activities that propose to use the waste as a fuel.

5. Apparatus

5.1 *Centrifuge*—Capable of spinning two or more centrifuge tubes at a speed controlled to give a relative centrifugal force of between 1200 to 1400. The speed to achieve this is generally between 3100 to 3600 rpm. The rotation speed necessary to achieve the relative centrifugal force can be determined from one of the following equations:

$$rpm = 1335 \sqrt{\frac{rcf}{d}} \quad (1)$$

¹ This test method 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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^εWithdrawn.

² Withdrawn. The approved version of this historical standard is referenced on www.astm.org.