



Designation: D 4979 – 95 (Reapproved 2003)

Standard Test Method for Physical Description Screening Analysis in Waste¹

This standard is issued under the fixed designation D 4979; 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 approval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This test method is used to identify wastes by describing certain physical properties. It has been developed as a rapid but effective means for visually screening wastes.

1.2 *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 and warning information is given in Section 7 and 9.1.6.

2. Terminology

2.1 *Description of Term 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 Method

3.1 Samples are inspected and the physical appearance is recorded, including color, turbidity, viscosity, physical state, layering, and any other observable attribute (for example, texture).

4. Significance and Use

4.1 This test method is intended for use by those in the waste management industries to aid in describing the physical characteristics of waste.

4.2 This test method can be used in identifying discrepancies between the waste, manifest, and historical descriptions.

5. Interferences

5.1 Opaque sample containers require removal of a representative sample sufficient for complete observation. It is recommended that a representative portion be transferred to a clean, dry, clear glass container.

¹ This test method is under the jurisdiction of ASTM Committee D34 on Waste Management and is the direct responsibility of Subcommittee D34.01.05 on Screening Methods.

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6. Apparatus

6.1 *Disposable Spatula or Eye Dropper.*

6.2 *Clear Glass Sample Containers.*

7. Hazards

7.1 Avoid inhalation and skin or eye contact, or both, with any hazardous materials.

7.2 This procedure must be carried out within a laboratory fume hood.

8. Sampling

8.1 Samples should be obtained in clear glass containers.

8.2 Liquid samples may require time to stabilize (that is, until layers reform).

8.3 It may be helpful to pick up the sample container and tilt, rotate, swirl, invert it or to manipulate the sample with a clean, disposable spatula or eye dropper.

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

9. Procedures

9.1 Inspect the waste sample and describe the physical attributes noting the following areas.

9.1.1 *Color*—Describe the visual color of the sample. If more than one color is present, list colors in decreasing order of prominence. Additional descriptive terms may be useful (for example, purple with swirls of blue and flecks of yellow).

9.1.2 *Turbidity*—Describe liquid samples or liquid portions of samples in terms of clear (transparent), cloudy (translucent), or opaque.

9.1.3 *Viscosity*—Describe the viscosity of liquids and sludges. Describe viscosity in reference to viscosity like water, medium viscosity like syrup or motor oil, or high viscosity like molasses or warm tar. Tip the container sideways or invert to note the viscosity. If a sample is tipped 90° for 5 s and has no visible flow, report it as such.

9.1.4 *Physical State*—Describe as liquid, solid, sludge, powder, granular, etc. Note any unusual physical attributes. Note the general range of particle size, (fine to coarse) and the presence of larger chunks. The presence of any free liquids must be noted, as must the presence of (or for stabilized wastes,