



Designation: D4979 – 08

Standard Test Method for Physical Description Screening Analysis in Waste¹

This standard is issued under the fixed designation D4979; 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 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 when received in the laboratory or during collection at the sampling site.

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 8.1.6.

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 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 has two uses. One is to visually screen wastes being received at the laboratory to identifying discrepancies between the waste, manifest, and historical descriptions. The other use is to visually examine soil and water samples while they are being collected. This information, along with professional judgment during sample collection, can be used to

increase the knowledge of the site contamination by increasing or reducing the number of samples collected based on visible indication of contamination or lack of visible indication of contamination. For example, if a soil or groundwater sample is collected “up gradient” of the area of known or suspected contamination to obtain site background concentrations, and the sample appears contaminated, the up gradient area can be relocated during that sampling event. Visual observation could also show that the sampling parameters need to be increased or decreased. This may reduce or eliminate the need for additional sampling trips to the field.

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 container.

6. Apparatus

- 6.1 *Disposable Spatula or Eye Dropper.*
- 6.2 *Clear Glass Sample Containers.*

7. Sampling

- 7.1 Samples should be obtained in clear glass containers.
- 7.2 Liquid samples may require time to stabilize (that is, until layers reform).
- 7.3 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.
- 7.4 In the laboratory, if necessary, allow the sample to come to room temperature in a sealed container. For example, frozen material should be allowed to thaw completely.

8. Procedures

- 8.1 Inspect the waste sample and describe the physical attributes noting the following areas.
 - 8.1.1 *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).
 - 8.1.2 *Turbidity*—Describe liquid samples or liquid portions of samples in terms of clear (transparent), cloudy (translucent), or opaque.

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.

Current edition approved Sept. 1, 2008. Published October 2008. Originally approved in 1989. Last previous edition approved in 2003 as D4979 – 95(2003). DOI: 10.1520/D4979-08.