



Designation: D7047 – 04

Standard Test Method for Mucilloid Content of Plantago Insularis (Ovata, Psyllium) Used as a Tackifiers¹

This standard is issued under the fixed designation D7047; 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 Quantitative test method to determine the mucilloid content of plantago insularis (Ovata, Psyllium) used as a tackifier.

1.2 The purpose of this test method is to provide a means of evaluating the amount of mucilloid in a plantago insularis (Ovata, Psyllium) tackifier.

1.3 The values stated in SI units are to be regarded as the standard. The values in parenthesis are provided for information only.

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.*

2. Terminology

2.1 Definitions:

2.1.1 For common definitions of terms in this standard refer to Terminology D635.

2.1.2 *tackifier, n*—in erosion control, a substance by which its characteristics are used for bonding various types of materials and/or soil together.

3. Summary of Test Method

3.1 Product specimen is taken and weighed, saturated and measured. The mucilloid content is expressed as a percent.

4. Significance and Use

4.1 The meaning of the test is related to the manufacturing and end use of the material, to determine characteristics of products.

5. Apparatus

5.1 *Electronic Gram Scale or Balance Scale*, minimum accuracy 0.000 gms.

5.2 *Graduated 50.0 mL Glass Cylinder*, with ground glass stopper.

5.3 *Weighting Boat*.

5.4 *60 Minute Timer*, graduated in one minute intervals.

6. Sampling, Test Specimens, and Test Units

6.1 Prepare specimen by separating 3.0 g of plantago insularis (Ovata, Psyllium) used as a tackifier from an undamaged bag by taking $\frac{1}{3}$ from the top of the bag, $\frac{1}{3}$ from the middle of the bag and $\frac{1}{3}$ from the bottom of the bag.

7. Procedure

7.1 Weigh weighting boat and place 1.0 g of the plantago insularis (Ovata, Psyllium) used as a tackifier specimen in the weighting boat.

7.2 Transfer the sample in the weighting boat quantitatively to the graduated cylinder.

7.3 Add 20 mls tap water to the cylinder then close cylinder with glass stopper.

7.4 Shake the cylinder vigorously for 1 min.

7.5 Set the timer for 60 min and start it, shake the cylinder vigorously for 1 min when the timer indicates the minutes elapsed for the procedure has reached 9, 19, 29, 39, 49, and 59.

7.6 After shaking the cylinder for the final time, allow the cylinder to stand for 23 h.

7.7 Record to the nearest ml the column which is a suspended solid.

8. Calculation or Interpretation of Results

8.1 Calculate the percentage mucilloid as follows:

$$\text{Mucilloid Content}\% = S/W \times 100 \quad (1)$$

where:

S = mls of the suspended solid, and

W = 20 mls of tap water.

9. Report

9.1 Report the equation as a percentage.

¹ This test method is under the jurisdiction of ASTM Committee D18 on Soil and Rock and is the direct responsibility of Subcommittee D18.25 on Erosion and Sediment Control Technology.

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