
Standard Method of Test for

Determination of Organic Matter in Soils by Wet Combustion

AASHTO Designation: T 194-22

Technically Revised: 2022

Technical Subcommittee: 1a, Soil and Unbound Recycled Materials



**American Association of State Highway and Transportation Officials
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1. SCOPE

- 1.1. The Wet Combustion method for the determination of soil organic matter is most applicable when it is desired to determine the humus-like, easily oxidized organic material to provide information relating to the suitability of the soil for plant growth. The method provides a good estimate of this type of organic matter, and, when the soil contains only this type, it can also provide a good estimate of the total organic content. However, the reagents used react only very slightly with fresh plant materials such as wood, roots, grass, and weed tops, etc., or with hydrocarbons, charcoal, lignite, coal, and the organic remains in ancient sediments. If such materials are present and the total organic matter is to be determined, the Loss on Ignition method found in T 267 must be used.
- 1.2. The following applies to all specified limits in this standard: For the purposes of determining conformance with these specifications, an observed value or a calculated value shall be rounded off “to the nearest unit” in the last right-hand place of figures used in expressing the limiting value, in accordance with ASTM E29, Using Significant Digits in Test Data to Determine Conformance with Specifications.
- 1.3. The values stated in SI units are to be regarded as the standard.
- 1.4. Refer to 29 CFR 1910.1200 for regulatory information for chemicals.
- 1.5. *The quality of the results produced by this standard are dependent on the competence of the personnel performing the procedure and the capability, calibration, and maintenance of the equipment used. Agencies that meet the criteria of R 18 are generally considered capable of competent and objective testing/sampling/inspection/etc. Users of this standard are cautioned that compliance with R 18 alone does not completely assure reliable results. Reliable results depend on many factors; following the suggestions of R 18 or some similar acceptable guideline provides a means of evaluating and controlling some of those factors.*

2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standards:*
- M 231, Weighing Devices Used in the Testing of Materials
 - M 339M/M 339, Thermometers Used in the Testing of Construction Materials
 - R 16, Regulatory Information for Chemicals Used in AASHTO Tests
 - R 18, Establishing and Implementing a Quality Management System for Construction Materials Testing Laboratories