



# Standard Test Procedures Manual

Section: SOILS

Subject: MOISTURE BY OVEN DRYING

## 1. SCOPE

### 1.1. Description of Test

This method describes the procedure for determining the moisture content of a soil by oven drying.

## 2. APPARATUS AND MATERIALS

### 2.1. Equipment Required

Balance - .01 accuracy.

Oven - capable of 50°C to 150°C.

Containers - aluminum tares with covers to prevent the loss of moisture during the weighing of the sample.

## 3. PROCEDURE

### 3.1. Test Procedure

Place the sample in the aluminum tare for which the weight is known and weigh and record as the "wet soil and tare."

Dry the sample in an oven at 110°C for at least four hours or until the dry sample is at a constant weight.

Remove the sample from the oven and let cool and weigh "dry soil and tare."

## 4. RESULTS AND CALCULATIONS

### 4.1. Calculations

Calculate the moisture content in a manner shown by the following example:

Weight of wet soil and tare	141.69 g
Weight of dry soil and tare	127.49 g
Weight of water	14.20 g
Weight of tare	35.86 g
Weight of dry soil	91.63 g
Moisture content %	15.50% g

$$\text{Moisture content} = \frac{\text{Wt. of water}}{\text{Wt. of Dry Soil}}$$

$$= \frac{14.20 \times 100}{91.63} = 15.5\%$$

### 4.2. Reporting Results

Report percent moisture on Form MR-20.

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STP 205-3

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## APPROVAL SHEET

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Format of test procedure updated.

Review/Implementation Process:  
Reviewed by the Materials Section of the Technical Standards and Policies  
Branch.

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Nil

Comments/Concerns/Implications (Budget/Environment/Stakeholders):

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Approval Recommended by R.A. Widger   -  -  
Senior Materials Engineer Date

Approval Recommended by A.R. Gerbrandt   -  -  
Dir., Technical Standards & Policies Br. Date

Approved by D.G. Metz   -  -  
Assistant Deputy Minister, Infrastructure Date

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