

## Colorado Procedure 57-23

### *Standard Method of Test for*

### **Determining the "Free Moisture" in Cold In-Place Recycled Pavement**

#### **1. SCOPE**

- 1.1 This procedure is to be used to determine the "free moisture" in the cold in-place bituminous recycled pavement.

#### **2. REFERENCED DOCUMENTS**

- 2.1 Two alternate procedures are recommended as follows:

- CP 43 Determining Moisture (Water) or Volatile Distillates Content of HMA (Method A)
- CP 21 Sieve Analysis of Soils

**Note 1:** Use of a hot plate is not allowed, the sample shall be dried to constant weight (mass) in an oven at  $230^{\circ}\text{F} \pm 9^{\circ}$  ( $110^{\circ}\text{C} \pm 5^{\circ}$ ) if CP 21 is used.

#### **3. SAMPLING**

- 3.1 Obtain a sample of the existing pavement from the roadway before cold in-place recycling. One sample per day of each pavement type being recycled should be sampled and tested.

**Note 2:** One sample per day needs to be taken to account for the variation in the in-place moisture of the existing pavement.

**Note 3:** Core samples are not recommended because of the excessive moisture introduced by the coring process.

- 3.2 Obtain a sample of the in-place recycled pavement, which has been compacted and is ready for either placement of the sealing emulsion or hot mix asphalt pavement overlay.

#### **4. PROCEDURE**

- 4.1 Determine the moisture content of the existing pavement sample by one of the procedures listed in Subsection 2.1.

- 4.2 Determine the moisture content of the cold in-place recycled sample from the same location as referenced in Note 2 by one of the procedures listed in Subsection 2.1.

**5. CALCULATIONS**

- 5.1 Calculate the percent "free moisture" as follows:

$$\text{Percent "free moisture"} = B - A$$

Where:

A = Percent moisture in Existing Pavement,  
B = Percent moisture in Cold Recycled Material.

**6. REPORTING**

- 6.1 Report the "free moisture" to the nearest 0.1%.
- 6.2 Record the "free moisture" on the field density report for cold recycled pavement.
- 6.3 Document results on your worksheet.

NOTE: There is currently no CDOT Form available.