

Colorado Procedure 57-19

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 cold in-place bituminous recycled pavement.

2. REFERENCED DOCUMENTS

- 2.1 Two alternate procedures are recommended as follows:

CP 43 Method A (Microwave Procedure)

CP 21 (Oven Dry Procedure)

Note 1: Use of a hot plate is not allowed, 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 prior to 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 on CDOT Form #XX.

NOTE: The CDOT Form is currently in development.