

## Colorado Procedure – Laboratory 4103-15

### *Standard Method of Test for*

### **Unrestrained Shrinkage of Concrete**

(This procedure modifies ASTM C 157-08. ASTM C 157-08 and CP-L 4103 shall be used together.)

#### **Scope**

- 1.1 This method establishes a procedure for determining the unrestrained shrinkage of Concrete mixtures.
- 1.2 This test method is identical to ASTM C157-08 *Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete*, with the following exceptions:

#### **10. Procedure for Curing of Specimens**

Delete Subsection 10.3 and replace with the following:

- 10.3 After the initial comparator reading, store the specimens in lime-saturated water at  $73 \pm 3$  °F [ $23 \pm 2$  °C] until they have reached an age of 7 days, including the period in the molds. At the end of the curing period, take a second comparator reading after the specimens have been brought to a more closely controlled temperature as was done prior to the earlier reading and in the manner described above.

#### **11. Procedure for Storage of Specimens**

Delete Subsection 11.1, 11.1.1 & 11.1.2 and replace with the following:

- 11.1 *Air Storage*—Store the specimens in the drying room, so that the specimens have a clearance of at least 1 in. or 25 mm on all sides. Take comparator readings of each specimen after periods of air storage after curing of 4, 7, 14, and 28 days. Preferably, take these readings in a room maintained at a relative humidity of  $50 \pm 4$  % while the specimens are at a temperature of  $73 \pm 3$  °F [ $23 \pm 2$  °C].

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