

SOILS IN-HOUSE CALIBRATION PROCEDURE # 7  
LIQUID LIMIT DEVICE

**EQUIPMENT CHECKED: LIQUID LIMIT DEVICE (Tex-104-E)**

---

**1. SCOPE**

1.1 This procedure provides instructions for calibrating the liquid limit device.

---

**2. APPARATUS**

*Inspection Equipment Required:*

1. Digital caliper readable to 0.01 mm
2. Ruler readable to 0.1 mm
3. Balance, minimum capacity 100 grams, readable to 0.1 gram
4. Straight edge
5. Timer

*Tolerance:*

The equipment shall meet the tolerances specified in test procedure Tex-104-E.

---

**3. PROCEDURE**

3.1 *Rate of drop (only for a motor-driven device):*

Measure the evolution of the cam by turning the motor on and counting the number of drops in 30 seconds.

3.2 *Base Dimensions:*

1. Using a ruler, measure the length and the width.
2. Using a caliper, measure the thickness.

3.3 *Brass Cup Dimensions:*

1. Using a caliper, measure the thickness of the cup.
2. Place a straight edge across the top of the cup, and using a ruler, measure the depth of the cup.
3. Weigh the Brass Cup including the cup follower to the nearest whole gram.
4. Measure the contact point between the cup and the base. Use a ruler to measure the diameter of the worn spot at the bottom of the Brass Cup.

3.4 *Gauge Block Dimensions:*

1. Using a caliper, measure the thickness, length, and width.