



**INDIANA DEPARTMENT OF TRANSPORTATION  
DIVISION OF MATERIALS AND TESTS**

**VERIFYING OVENS  
ITM No. 903-15**

**1.0 SCOPE.**

- 1.1 This test method covers the procedures for verifying the temperature indicator settings on general purpose ovens.
- 1.2 This ITM may involve hazardous materials, operations, equipment and may not address all of the safety problems associated with the use of the test method. The user of the ITM is responsible for establishing appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.

**2.0 APPARATUS.**

- 2.1 Liquid-in-Glass Thermometer, verified by a Certified National Institute of Standards and Technology (NIST) traceable thermometer, graduated in 2.0°F increments, and having a range which includes the drying temperature of the material indicated in the appropriate test method
- 2.2 Digital Thermometer, verified by a NIST traceable thermometer, graduated in 0.1°F increments, and having a range which includes the drying temperature of the material indicated in the appropriate test method
- 2.3 Thermometer well, brass or aluminum

**3.0 TERMINOLOGY.** Definitions for terms and abbreviations shall be in accordance with the Department's Standard Specifications, Section 101.

**4.0 SIGNIFICANCE AND USE.** This ITM is used by laboratory personnel to verify the temperature indicator settings on general purpose ovens.

**5.0 PROCEDURE.**

- 5.1 Record the identification number, manufacturer, and model number of the oven.
- 5.2 Record the identification of the certified thermometer.
- 5.3 Place the liquid-in-glass thermometer or digital thermometer probe inside the thermometer well. Position the thermometer or probe and thermometer well as close to the three-dimensional center of the oven as possible.

- 5.4 Set and record the oven temperature at the operating temperature of the material indicated in the appropriate test method.
  - 5.5 Record an initial reading 1 hour after closing the oven.
  - 5.6 Adjust the temperature indicator of the oven if an observed reading is outside the tolerance specified in the appropriate test method. Allow at least 1/2 hour for the temperature to stabilize between each adjustment.
  - 5.7 Continue until three consecutive readings, at 1/2 hour intervals, meet the required tolerance.
  - 5.8 If there is a temperature offset required, visibly note the offset on the outside of the oven.
- 6.0 **TOLERANCE.** Ovens shall be capable of maintaining a constant temperature range listed in the appropriate test method.

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**OVEN TEMPERATURE VERIFICATION  
ITM 903**

Oven Identification: \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Model No.: \_\_\_\_\_

Thermometer used: ASTM No. \_\_\_\_\_ Ser. No.: \_\_\_\_\_

Operating Temperature: \_\_\_\_\_

<b>Time</b>	<b>Initial Reading</b>
1 h	
1-1/2 h	
2 h	
2-1/2 h	
3 h	

Remarks: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Verified by: \_\_\_\_\_

Date: \_\_\_\_\_

Next Due Date: \_\_\_\_\_