

# Appendix

## Infrared Thermometer

Memorial University Technical Services

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UEI Test Instruments

### 1.0 Equipment

The following is required :

Large glass  
Crushed ice  
Water

### 2.0 Procedure

Step 1: Fill a large glass to the very top with ice (crushed ice is preferred but not required).

Step 2: Slowly add very cold water until the water reaches about one half inch (1 centimeter) below the top of the ice.

Note: If the ice floats up off the very bottom of the glass at all, the ice bath will likely be warmer than 32.0°F (0.0°C). Pour off any excess water.

Step 3: Gently stir the ice mixture and let it sit for a minute or two.

Step 4: Make sure your infrared thermometer is set to an emissivity setting of 0.95 or 0.97.

Step 5: Hold your infrared thermometer so that the lens or opening is directly above and perpendicular to the surface of the ice bath.

Note: If you hold your infrared thermometer too far from the surface of the ice bath or hold it at an angle, your measurement will include the sides of the glass or container or even the table it is resting on and give you an inaccurate reading.

Step 6: Taking extra care to ensure that the "field of view" (the size and shape of surface area being measured) is well inside the sides of the glass or container, press the button on your infrared thermometer to take a measurement.

If you perform the test correctly, and your infrared thermometer is properly calibrated, it should read within your unit's stated accuracy specification of 32.0°F (0.0°C).