

- Subject** Pre-Operations Check of Radiation Detection Meters for Research Laboratories
- Purpose** To determine the operational condition of the portable instrument through performance testing.
- References** ANSI N323B-2003  
Iowa Department of Public Health Calibration of Radiation Survey and Monitoring Instruments Regulatory Guide  
[Iowa State University Radioactive Materials Safety Manual](#)  
Iowa State University Radiation Safety Training for Material Users
- Frequency** A performance check shall be made prior to each use, during intermittent use conditions and should be done several times a day during continuous use.
- Equipment** Survey Meter  
Assigned Check Source
- Notes** This procedure applies to all portable survey meters.

**Hazard Control Measures** None

### Procedure

1. Select the correct instrument for the type of radiation measurement. Select a GM meter for beta radiation detection. Select a NaI scintillation meter for gamma radiation detection.
2. Verify that the meter has been calibrated within the last 365 day annual cycle. Today's date must be within the calibration period listed on the calibration tag on the instrument.
3. Verify that the meter is in good working condition: tight knobs and cables, unbroken bezel glass, undamaged detectors.
4. Verify the battery condition using the instruments battery check function. Batteries that do not pass this check must be replaced.
5. Verify that the instrument responds to radiation by measuring the check source attached to the side of the meter. The meter must detect the source.
6. If the meter does not successfully pass all of these checks, do not use the meter. Contact EH&S to discuss repair and determine another suitable detection method.

Revised by \_\_\_\_\_ Date \_\_\_\_\_

Approved by \_\_\_\_\_ Date \_\_\_\_\_