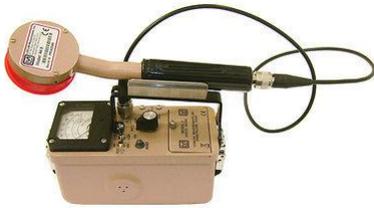


# Count Rate Meter Surveys

## HOW TO PERFORM A COUNT RATE METER SURVEY



### WHEN & WHERE TO SURVEY

Frequent surveying is necessary while working with radioactive material. Perform an **After Use Survey** in your work area upon completion of work. Perform a **Monthly Survey** of the entire lab and record it in the lab survey notebook at the end of each month.

Surveys are conducted in all areas where radioactive materials are used or stored: floors and storage areas; equipment; work surfaces.

### CHOOSE THE CORRECT PROBE

Isotope	Preferred Probe
$^3\text{H}$	None acceptable - wipes only
$^{14}\text{C}$ , $^{35}\text{S}$	Wipes preferred; GM Pancake
$^{123}\text{I}$ , $^{124}\text{I}$ , $^{125}\text{I}$	Nal scintillation
All other isotopes	GM Pancake



*NaI Scintillation Probe*



*GM Pancake Probe*

### CHECK THE METER

Always perform an operational check the first time you use the meter each day.

- **Battery** – Turn the dial to “BAT.” As long as the needle is in the BAT TEST range, the meter can be used. If not, replace the batteries.
- **Condition** – Check the physical condition of the meter, including cord and probe, to ensure it will operate as intended.
- **Calibration** – Check the calibration sticker and verify the meter has been calibrated in the last 12 months.
- **Operation** – Verify that the meter responds to radiation using a known radiation source within the lab.
- **Background** – Move away from your radioactive use area and check what the meter is reading. It should read between 20 and 60 cpm for GM probe and 100-260 cpm for NaI probe.

# HOW TO SURVEY

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## Survey yourself

Scan your hands and lab coat cuffs and sleeves, front and pockets. Scan the tops and bottoms of your shoes. Keep the probe about ½ inch from the surface you are scanning and move the probe about one to two inches per second.

## Survey your work area

Following the same guidelines for surveying yourself, check the workbench, floor and equipment you have used.

## Finding contamination

If an area or item with a sustained count rate more than double background is found, it should be considered contaminated. You may either:

- **Label** the item or area with “caution radioactive materials” tape including the isotope, date and count rate (cpm).
- **Clean** the item to background cpm.
- **Dispose** of the item as radioactive waste.
- **Store** the item decay. It should be bagged and labeled with the date, isotope and cpm.

# DOCUMENTATION

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Monthly surveys must be recorded in the yellow lab survey notebook. Indicate on the log sheet: the building and room surveyed, your name and date, locations surveyed and results.

**For questions about surveys, contact EH&S at 206.543.7262.**