RADIATION SURVEY METER USE

A survey meter is a portable instrument that generally can be used to identify both fixed and removable contamination. It cannot identify contamination of all radioisotopes and differs in the detection efficiency of others. A survey meter can and should be of great assistance for identifying contamination of most radioisotopes used in UNL radiation laboratories.

A survey meter video describing the check may be found on UNL's Environmental Health and Safety's website in the Training, Video Resources, Survey Meter Overview link. This video can also be accessed from the following link: https://mediahub.unl.edu/media/12248.

Survey Meter Selection
The table below provides information to determine which survey meter should be used when working with a particular radioisotope.

Radio-isotope	Radiation Type	Detector Required		Radio-isotope	Radiation Type	Detector Required
Ca-45	Beta	Geiger-Mueller		*Na-22*	Beta/Gamma	Geiger-Mueller
C-14	Beta	Geiger-Mueller		*P-32*	Beta	Geiger-Mueller
Cl-36	Beta	Geiger-Mueller		*P-33*	Beta	Geiger-Mueller
Co-57	Gamma	Geiger-Mueller		*Se-75*	Gamma	Geiger-Mueller
Cr-51	Gamma	Geiger-Mueller		*S-35*	Beta	Geiger-Mueller
Fe-59	Beta/Gamma	Geiger-Mueller		*Rb-86*	Beta/Gamma	Geiger-Mueller
I-125	Gamma	Nal-Scintillator		*U-238*	Alpha/Beta/Gamma	Geiger-Mueller

For any other radioisotope that is not listed on the above table, contact the Radiation Safety Office.

Pre-Operational Check

Prior to the use of any survey meter, a pre-operational check must be conducted. The steps to perform the check are discussed in the EHS video and are also listed on each calibration sticker located on the side of the survey meter.

Conducting Surveys

After conducting a pre-operational check, the survey meter may be used for contamination detection. Conducting a contamination check of equipment and surfaces is discussed in the EHS video. If contamination is found, see the EHS SOP, *Contamination Surveys for Radioactive Material Laboratories*, for additional information.