



Environmental Health & Safety Policy Manual		
Issue Date: 11/30/2010		Policy # EHS-100.06
Radiation Survey Meter - Scan Procedures		

1.0 PURPOSE:

To enable quick identification of radioactive contamination with a hand held survey meter and take corrective actions if required.

2.0 SCOPE:

The Radiation Safety Officer will use a survey meter and scan radiation packages entering the campus by mail delivery and while performing all quarterly lab inspections. All lab employees will perform survey meter scans on any high energy beta or any gamma emission isotope used at LSUHSC, to include Cr51, I125 and P32.

3.0 RESPONSIBILITIES:

3.1 Radiation Safety Officer shall:

- Perform meter scans during quarterly lab inspections and maintain these records for the current year and previous three fiscal years.
- Perform meter scans while checking-in all packages containing radioactive material.

3.2 Principal Investigators shall:

Ensure lab employees are performing meter scans and properly documenting the results.

3.3 Lab Employees shall:

Perform meter scans and properly document the results in a binder which will be made available to the Radiation Safety Officer and any requesting inspector from the Louisiana State Department of Environmental Quality (DEQ). Results shall be kept for the current year and the previous three fiscal years.

4.0 OPERATING PROCEDURES:

4.1 Selection of Survey Meter Probe



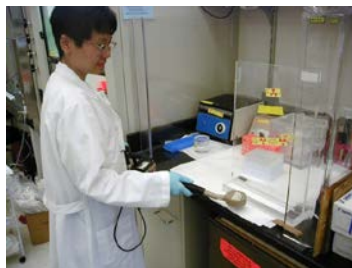
Geiger-Mueller (GM) Probe Survey Meter Sodium Iodide (NaI) Probe

Which Isotope?	Which Probe ?
P-32	(GM)
Cr-51	(GM) or (NaI)
I-125	(NaI) or (GM)
C-14, H-3, S-35	Wipe Test only

4.2 Operation of Survey Meter

- 1) Check calibration date (not older than 12 months) – **Contact RSO if calibration is needed.**
- 2) Perform battery check by turning the selector switch to the BAT position. Insert fresh batteries in the instrument if needed.
- 3) Adjust the response control by flipping the toggle switch to F (fast).
- 4) Turn the selector switch to the x.01 scale range initially to obtain background counts.
- 5) Perform background count rate. Go to a non-contaminated area and perform a background check and record on Appendix A, RS 06 – Radiation Survey – Meter Scan - Form.
- 6) Scan all areas in which contamination may likely be found such as:

Work Areas



Floors



Radiation Equipment



Personal Protective equipment





- 7) Record all values on RS 06 – Radiation Survey – Meter Scan – Form.
- 8) If greater than 3x background value your area is considered contaminated. Clean and perform survey again until values are below 3x.

5.0 EMPLOYEE TRAINING AND EDUCATION:

Radiation Safety Officer shall provide initial training in the required Radiation Safety Course.

6.0 RECORDKEEPING:

All meter scan records using the RS 06 – Radiation Survey – Meter Scan – Form shall be kept in the laboratories in which they were taken and stored in a folder for review for the current year and the three previous fiscal years.

7.0 APPENDIX:

A. Radiation Survey – Meter Scan – Form

Radioactive Material Laboratory Survey and Meter Scan Form

PI: _____ Department: _____ Building & Lab #: _____

Gamma Counter - Manufacturer/Model/Serial #: _____

LSC – Manufacturer/Model/Serial #: _____

Note: LSC must be used to protect H₂ & C₁₄.

Survey Meter – Manufacturer/Model/Serial # _____

Background: _____ mR/Hr or cpm Battery Check: _____ Calibration Date: _____

Counter Information Type (Check one) gamma counter or LSC:

Isotopes used in Lab: (Check all that apply)

C-14 Ch-51 H-3 P-32 I-125 S-35 _____

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

Rewipe of # _____ Rewipe of # _____

(* Results should read less than twice background in cpm.

Inform the Radiation Safety Officer if it exceeds this amount.

(Contaminated areas must be decontaminated immediately and documented)

Performed By: _____ Date: _____