LOG SHEET FOR SURVEY OF INCOMING RADIOISOTOPE PACKAGES

NAME: _____ DATE _____

Packages must be opened in the radioisotope room (Rm 482). Wear gloves at all times. Use one log sheet per vial of radioisotope. For initial survey, record survey meter readings in CPM in mR/hr; compare the mR/hr reading with the pre-shipping survey entry on the surface of the incoming package. Check a known non-radioactive area for swipe test area. Include sealed standards with wipe test samples. Calculate the counting efficiency and convert CPM to DPM after subtraction of background CPM. Record RESULTS in NET DPM.

RADIOISOTOPE_____ INVENTORY #_____

A. INITIAL SURVEY METER SCAN:

Use calibrated survey meter. BATTERY CHECK_____

READING	BACKGROUND		3 FEET		AT SURFACE	
	CPM	mR/hr	CPM	mR/hr	CPM	mR/hr

Comparison with mR/hr entry on package: _____

B. SWIPE TESTS: Location # must correspond to vial number. Attach LSC printout to this log sheet.

LOCATION		RESULTS	
#	DESCRIPTION	CPM	NET DPM
1	OUTER SURFACE OF OUTER BOX		
2	INNER SURFACE OF OUTER BOX		
3	OUTER SURFACE OF INNER CONTAINER		
4	OUTER SURFACE OF VIAL OF RADIOISOTOPE		
5	INNER SURFACE ON INNER CONTAINER		
6	ANY PACKING MATERIAL		
7	BACKGROUND (NEGATIVE CONTROL)		NA
8	SEALED STANDARD BACKGROUND		NA
9	SEALED STANDARD (Record dpm printed on the LSC vial)		

Sealed standard isotope:_____ Sealed Standard Efficiency (CPM/DPM). _____

See example calculation on back.

COMMENTS/FOLLOW-UP:

C. LABELING/RECORD:

1. Label isotope vial with Date of Receipt
2. Label isotope vial with Inventory Number
3. Record its receipt on a new sheet in the "Radioisotope Use Log"

RADIOISOTOPE SATISFACTORILY SURVEYED AND CHECKED IN

_____

Signature of Surveyor

Example Calculation (14C):

LOCATION		RESULTS	
#	DESCRIPTION	CPM	NET DPM
1	OUTER SURFACE OF OUTER BOX	35.35	*13.69*
2	INNER SURFACE OF OUTER BOX	20.00	*0*
3	OUTER SURFACE OF INNER CONTAINER		
4	OUTER SURFACE OF VIAL OF RADIOISOTOPE		
5	INNER SURFACE ON INNER CONTAINER		
6	ANY PACKING MATERIAL		
7	BACKGROUND (NEGATIVE CONTROL)	22.15	NA
8	SEALED STANDARD BACKGROUND	20.23	NA
9	SEALED STANDARD (Record dpm printed on the LSC vial)	45793.25	47500

Sealed standard isotope: 14C Sealed Standard Efficiency (CPM/DPM). 0.964

Step 1. Net cpm of sealed standard: 45793.25 – 20.23 = 45773.02 cpm

Step 2. Efficiency: 45773.02 cpm ÷ 47500 dpm = 0.964

Step 3. NET DPM:

#1 Example:

35.35 – 22.15 = 13.20 cpm above background
13.20 cpm ÷ 0.964 cpm/dpm = 13.69 dpm

#2 Example:

20.00 – 22.15 = -2.15 cpm above background
-2.15 cpm ÷ 0.964 cpm/dpm = -2.23 dpm
Net dpm is below background. Enter 0 dpm.