

APPLICATION FOR RESEARCH USE OF RADIOACTIVE MATERIAL
DUKE UNIVERSITY AND DUKE MEDICAL CENTER

TYPE SUBMITTED COPY AND RETURN TO: RSO, BOX 3155, DUMC

1. Name of applicant (Name, title, and department of individual who will use or directly supervise use of radioactive material). Include Campus Box Number, Phone and E-mail address.

2. Locations at which radioactive material will be used (Buildings and room numbers).

3. Previous license number (Duke, North Carolina or USNRC).

4. Radioactive material (elements and mass numbers).

5. Activity to be possessed (Maximum activity to be possessed for each radionuclide listed in Item 4).

6A. Describe the purpose(s) for which each radionuclide will be used, to include:

- a. experimental design
- b. identification of types of labeled compounds
- c. approximate activity per experiment
- d. estimated number of experiments per month
- e. specify laboratory animals (if applicable)

6B. If Item 6A states that iodinations are to be performed, provide the following information:

a. Location of hood in which iodinations will be performed.

Building _____ room no. _____

b. Has the hood's airflow been measured? YES NO

If YES, date of measurement _____; cfm _____

c. Does the hood have a charcoal filter? YES NO

d. Amount of activity (mCi) used per iodination: _____

e. Efficiency of iodination, i.e. activity in final product: _____ mCi

f. Is the difference between d and e released via the hood exhaust? YES NO

g. Estimated number of iodinations per month _____

6C. Some S-35 labeled compounds, i.e. methionine, can be volatile. If the use of S-35 is being requested, have the labeled compounds been determined to be potentially volatile? YES NO

If YES, describe the precautions to be taken to minimize internal deposition.

**TRAINING IN RADIOLOGICAL SAFETY PRACTICES OF INDIVIDUAL NAMED
IN ITEM #1**

7. Type of Training	Institutions Dates	Duration of Training (hours)	On the Job (circle answer)	Formal Course (circle answer)
1. Principles & practices of radiological health safety			YES NO	YES NO
2. Radioactivity measurement standardization & monitoring techniques & instruments			YES NO	YES NO

EXPERIENCE WITH RADIONUCLIDES OF INDIVIDUAL NAMED IN ITEM #1

ISOTOPE	WHERE/WHEN	QUANTITIES & APPLICATIONS

PHYSICAL FACILITIES, EQUIPMENT, AND RADIATION INSTRUMENTATION

8. Radiation Detection instruments (use separate sheet if necessary)		
Types of instruments (Include make & model number of each)	Manufacturer's Model	Radiation detected
a) Monitoring & surveying instruments <input type="checkbox"/> THIN END WINDOW GM <input type="checkbox"/> PANCAKE GM <input type="checkbox"/> SIDE WINDOW GM <input type="checkbox"/> ION CHAMBER <input type="checkbox"/> NaI (TI) DETECTOR <input type="checkbox"/> PLASTIC SCINTILLATOR		<input type="checkbox"/> BETA <input type="checkbox"/> GAMMA <input type="checkbox"/> ALPHA
b) Counting instruments <input type="checkbox"/> LSC <input type="checkbox"/> GAMMA COUNTER <input type="checkbox"/> OTHER		

Signature of individual named in Item 1.	
_____ Signature	_____ Date
Name of designee during absence of individual named in Item 1.	
_____ Name (PRINT)	_____ Email Address