

**UNIVERSITY OF SOUTH CAROLINA
APPLICATION FOR THE USE OF RADIOACTIVE MATERIALS**

- A. Principal Investigator: _____
- Faculty Title: _____
- Department: _____ Office Phone: _____
- Laboratory Address: _____ Lab Phone: _____
- E-mail Address: _____

- B. Training for the Principal Investigator: List Location(s) and circle appropriate response.

Type of Training	Location	On the Job		Formal Course	
		Y	N	Y	N
1.Principles & Practices of Radiation Protection.		Y	N	Y	N
2.Radioactivity measurements, monitoring techniques and instrumentation		Y	N	Y	N
3.Math and calculations basic to use and measurement of radioactivity.		Y	N	Y	N
4.Biological effects.		Y	N	Y	N

- C. Experience:

Isotope	Maximum Activity	Institution	Duration _____

- D. Protocols: On a separate sheet of paper, explain the general scope of your research. In addition, provide a brief protocol for each isotope you are requesting to use.
- E. Specific Techniques: Please list the specific techniques involving radioactivity in your research, ie. PCR, tissue culture, labeling, RIA kits, iodination. Using the following chart, list each technique with the isotope, chemical form, the amount (uCi/mCi) that will be used for the experiment, the frequency of each experiment and the usual amount that will be ordered each time. An example is provided.

Technique	Isotope	Chemical Form	Amt. Per experiment	Frequency of experiment	Amt. to Order
<i>EXAMPLE: Southern Blots</i>	<i>P-32</i>	<i>DCTP</i>	<i>50 uCi</i>	<i>Weekly</i>	<i>250 uCi</i>

F. Waste Generation:
Mark each type of radioactive waste that will be generated by your research.

√ Type of Waste

- _____ Solid Waste (paper, glassware, lab trash)
- _____ Scintillation Waste:
- _____ List Brand & Type of Scintillation fluid to be used:

(NOTE: **Only non-hazardous/biodegradable types may be used.**)

_____ Biological Waste (animals, tissues, bedding)

_____ Liquid Waste:
Include all major constituents, i.e. Chemicals, that will be added to the liquid and approximate percentages:

Constituents other than radioisotope: (Buffers, TCA, solvents, other chemicals)	Percentage:
_____	_____ %
_____	_____ %
_____	_____ %
_____	_____ %

Please Note: The generation of mixed waste (waste containing both radioactive material and EPA listed or characteristic hazardous waste) is to be avoided.

pH of liquids must be between 6-9 before Radiation Safety can pick up for disposal.

- G. Please submit a sketch of each room in which radioactive materials will be used or stored, detailing radioactive work areas, storage areas, waste storage, hot sinks, ventilation hoods, and shielding. Also indicate locations of student or technician desks.
- H. Briefly describe the contamination controls you will be following (i.e. weekly wipes, GM surveys, personnel monitoring), shielding needs, and other precautions which will be considered:

- I. List all radiation detection or measurement instruments that you will use. Include the model number and the location of the unit. **(PLEASE NOTE: Each laboratory shall be equipped with a portable monitoring device to be used for personnel and area monitoring, except if H-3 is used solely.)**

<u>Type</u>	<u>Model No.</u>	<u>Location of Unit</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

- J. Please list two references of individuals who could attest to the Principal Investigator's experience with radioactive materials.

<u>Name</u>	<u>Institution</u>	<u>Phone No.</u>
1. _____	_____	_____
2. _____	_____	_____

- K. Radiation Protection Program:
I certify that I have read and fully understand the University's Radiation Safety Manual and I will abide by all of its provisions.

Signature _____ *Date* _____