University of Kentucky
Application for Authorization to Possess and Use Radioactive Materials

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INSTRUCTIONS: Complete (please type) and email (radsafe@uky.edu), or mail, a copy of all the information to the Radiation Safety Office, Room 102 Dimock Animal Pathology Building, Speed Sort 0076. A copy of the application with a designated number will be returned to the authorization user when approved by the Radiation Safety Committee.

Authorized User:

Name:	UK Title:	Building & Room:
Department:	Phone Numbers Office: Lab:	Email Address:

2. Project Title_____

3. Building/Room # where material will be located:

Use:	Material Storage:
Waste Storage:	

4. List radionuclides and limits (Item 9 requires procedures for each radionuclide:

Radionuclide	Half Life	Total Quantity	Max. Amount per Experiment (mCi)	Chemical Form

5. Is the Material to be obtained or used in especially hazardous form? (e.g. carcinogen, highly toxic) No: ☐ Yes: ☐

If Yes, please explain: _____

_____

6. Radiation Protection: Check special equipment to be used to control radiation exposure:

Protective Gloves: ☐	Lab Coat: ☐	Eye Protection ☐	Mechanical Pipettes: ☐
Shielding Lead : Lucite: ☐	Shielded Storage: ☐	Fume Hood: ☐	Absorbent Liner & Tray ☐
Radiation Signs & Labels ☐	GM Survey Meter: ☐	Handling Tools: ☐	Transport Container: ☐
Shoe Covers ☐	Liquid Scintillation Counter: ☐	Gamma Well Counter: ☐	Ion Chamber: ☐

7. Waste Disposal: Check the appropriate item(s). Describe all waste streams. Include information on any hazardous materials, biohazards, carcinogens, toxic chemicals etc.*

☐	Solid	
☐	Aqueous	
☐	Organic	
☐	Animal	

8. Describe the method/procedure to be taken for ensuring radioactive material is secure against unauthorized access: _____

_____

9. Please Check the type of application below and submit a separate paper describing the use of radioactive material by supplying the requested information.

A. Use as a sealed source: ☐

- Rationale for experiment.
- Description of experimental technique.
- Description of sealed source; chemical form and type of seal (single or double seal)
- Describe handling procedures for each radioactive source listed in section 4.
- Describe storage area and when applicable describe any containers to be used in transporting the source
- Describe radiation monitoring equipment; including methods and frequency of surveys.

B. Use in Unsealed applications: ☐

- Give a brief rationale for the experiment.
- Provide a description of experimental techniques, especially those phases of the experimental procedures where handling of radioactive material is involved. This should be provided for each radionuclide listed in section 4.
- Indicate those steps in the experimental procedure where loss of radioactive material is possible and describe the measures to be taken to control contamination.
- List precautions to be taken to eliminate contamination of the personnel such as the use of protective clothing and gloves. Also describe the use of any special shielding devices to be used to limit personnel exposure
- Describe material and waste storage area.
- Describe radiation monitoring equipment; including methods and frequency of contamination surveys.

C. Use as an ionization source for an electron capture detector in gas chromatography: ☐

- Describe the type of analysis to be performed.
- Describe any operating limits to be imposed on the system to prevent loss of radioactive material.
- Describe the system used for dischargin the effluent of the apparatus to controlled ventillation such as a fume hood.
- If you plan to perform source cleaning operations and/or install new sources, describe the procedure and list the precautions to be taken to control contamination and to limit exposure to personnel.

10. Note: Please refer to the Radiation Safety Manual for the proper guidelines for the segregation and consolidation of waste.

D. Use in animal studies: ☐

- Answer all the questions in either A or B, depending on whether the radioactive material is sealed or unsealed.
- How (and where) will animals be housed.
- Provide the concentration (in units of uCi/gram) of the radionuclide averaged over the entire weight of the live animal.
- Describe the kind and number of animals to be used in the study.
- Describe the radionuclide (including activity) to be administered per animal and how administered.
- The ultimate fate of the animal and suspected excretion rate of the radionuclide
- Describe handling and monitoring of the animals and proposed method of disposal of the animal(s) and excreta.

E. Human use: ☐

- Purpose for conducting study.
- State whether human use is considered routine or non-routine. Include the research protocol for non-routine use.
- Give the plan of investigation in sufficient detail to permit a critical evaluation of the radionuclide methodology to be employed and the radiation safety controls to be established.
- Describe the human subjects. Include their statement of consent.
- Give the quantity of radioactive material to be administered (in millicuries).
- Calculation of radiation dose.
- Give a statement on the adequacy of the physical facilities and equipment for supporting the proposed study
- Estimated time needed for completion of the study.
- Schedule for reporting the results of the study.

I affirm that the foregoing facts are correct to the best of my knowledge and that I shall conduct and/or supervise the described work with full regard for the safety of those engaged in the work and of the general public. I have received a copy of the Radiation Safety Manual for the University of Kentucky and understand that I am to abide by the policies and procedures contained therein.

Upon terminating my authorization and prior to departing the University, I agree to contact the Radiation Safety Office to arrange for the close out of my laboratory and the disposal of radioactive material and waste.

Applicant: _____(PLEASE PRINT)

Signed: _____ Date: _____