

GUIDELINES FOR COMPLETING THE APPLICATION TO USE RADIOACTIVE MATERIALS FOR NON-HUMAN RESEARCH OR TRAINING PURPOSES

The use of radioactive materials at Newark campus has to be approved by the members of the Radiation Safety Committee in accordance with the United States Nuclear Regulatory Commission and New Jersey State Department of Environmental Protection and Energy.

The application can be obtained from room: 534, the Office of Radiation Safety Services (ORSS) located in Medical Science Building. All Applications must be typed. The completed application can be submitted at ORSS.

Item 1 is self-explanatory

Item 2 (a), e.g. Carbon-14 can be filled as $^{14}\text{C}_6$

Item 2 (b), Chemical and/or physical form of each radioisotope requested, e.g. Leucine in liquid form

Item 2 (c), The maximum possession limit of millicuries of each radioisotope requested at any time

Item 2 (d) & (e), How much (activity) of each requested radioisotope can be used over a month and over the next two years

Item 3 (a), Document radiation safety training with date and year of all users under this license.

Item 3 (b), Describe your experience in using radioactive materials. For each radioisotope include the quantities handled, where the experience was gained, duration, and type of use. Attach additional sheets if necessary

Item 4 (a), Describe the overall use of radioisotopes in experiments. Be specific in describing experimental model and methodology for handling radioactive materials. If in vivo procedures are planned, please describe the arrangements made for caring of radioactive animals. You may substitute copies of protocols for Item 4 (a).

Item 4 (b), Describe all radioactive material handling procedures. Be specific in handling methods with remote applicators, remote pipetters, forceps, etc.

Item 4 (c), List quantities (millicurie or microcurie) of radioactive material used in each procedure.

Item 4 (d), Describe the standard safety precautions that will be used in handling the radioisotopes to maintain consistence with the ALARA concept. e.g. shielding, distance, use of absorbing pads, gloves, personnel monitors, etc. And make sure doors will be locked when no one is in the laboratory.

Item 4 (e), Describe the separation of radioactive waste, short lived radionuclide versus long lived radionuclides and also dry, liquid and animal waste. The procedures outlined in the policy manual should be adopted for radioactive waste disposal. All radioactive solid, liquid, and animal wastes should be disposed of through the ORSS. Proper shielding should be used while collecting waste in the laboratory. Give details of storage facility in the lab.

Item 5, Description of the facilities, e.g. sharing the laboratories with more than one person, storage of radioisotopes (refrigerator, fume hood, cabinet, etc.), availability of equipment (scintillation counter, NaI detector), survey meters, and availability of shielding material. Attach sketch of the laboratory facility.

Item 6, self-explanatory

Radiation Safety Precautions:

1. Double gloves should be worn to minimize accidental contact with radioisotopes
2. Labeled compounds should be handled with disposable gloves
3. Wipe tests should be performed at regular intervals (weekly or monthly) depending on the amount used
4. Contamination surveys should be performed after each experiment
5. The laboratory doors should be locked when unattended
6. Personnel monitors (film badges) should be worn by all authorized users
7. All radioisotope work should be performed on absorbent pads
8. Glassware should be appropriately labeled with radioactive caution signs.