

FORM RSO-1

Application for Authorized or Qualified User Status: Radioactive Materials

(Page 1 of 2)

For RSC Use Only	
Approval Initials:	
_____ RSO	
_____ RSC Chairperson	
_____ Member	User Number _____
_____ Member	Date Approved _____

Directions: This application must be made prior to or concurrently with APPLICATION FOR POSSESSION AND USE OF RADIOACTIVE MATERIALS (Form RSO-2). Complete and sign this form and return it to the Radiation Safety Officer. When approved by the Radiation Safety Committee, a User Number will be assigned and a copy will be returned to the applicant and serve as his/her USER AUTHORIZATION.

1. Name _____ Date _____

2. Social Security Number _____

3. Department _____ Rank or Title _____

4. Highest Degree _____ Year _____

5. Office: Building _____ Room _____ Phone _____

6. Type of Application (Check One):

Authorized User: [] Initial
[] Amendment or Update

Qualified User: [] Initial
[] Amendment or Update

Name of Authorized User under whom you will be working.

7. Training and Experience: Please complete the attached page.

8. Signature below affirms that the applicant has read and will comply with the rules, regulations and procedures set forth by the Hamilton College Radiation Safety Committee and Radiation Safety Officer. The applicant accepts the responsibility for maintaining current knowledge of such rules, regulations, and procedures, and for promptly informing the Committee of any changes in use, including prolonged absence, termination, moving of lab, personnel changes, etc.

Signature _____

Training and Experience (Furnish copies of certificates. Use supplemental sheets if necessary)

Type of Training	Where Trained	Date(s) of Training	On the Job (Total Hours)	Formal Courses (Total Hours)
i) Principles and practice of radiation protection				
ii) Radioactivity measurement standardization and monitoring techniques and instruments.				
iii) Mathematics and calculations basic to the use and measurement of radioactivity				
iv) Biological effects of radiation				

Experience with Radiation (Actual use of radionuclides or equivalent experience)

Radionuclide	Maximum Activity	Where Experience was Gained	Duration of Experience	Type of Use

FORM RSO-2

**Application for Possession
and Use of Radioactive
Materials**

(Page 1 of 4)

For RSC Use Only Approval Initials:	
_____ RSO	
_____ RSC Chairperson	
_____ Member	User Number _____
_____ Member	Date Approved _____
Dosimetry Required: <input type="checkbox"/> None <input type="checkbox"/> whole body <input type="checkbox"/> wrist <input type="checkbox"/> ring <input type="checkbox"/> bioassay-thyroid <input type="checkbox"/> bioassay-urine	

Directions: This form is to be completed only by Authorized Users or persons applying concurrently for Authorized User Status (Form RSO-1). Complete, sign and return to the Radiation Safety Officer. When approved by the Radiation Safety Committee, a copy will be returned to the applicant and serve as his/her AUTHORIZATION.

1. Name of Applicant _____ Authorized User No.: _____

2. Application Type: _____ New
 _____ Amendment

3. Date _____

4. Applicants Office:

Building _____ Room _____ Phone _____

5. Location of Proposed Use:

Building _____ Room _____ Phone _____

Radionuclides Requested	Chemical and Physical Form +	Possession Limit (mCi)	Estimated Monthly Use

+ Specify Gas, Liquid, Sealed, Sealed Source, Crystalline, Powder

Proposed Use

Complete this part for each radionuclide requested. (Not for sealed sources.)

1. Radionuclide _____

2. Are any of the following to be used?

Pathogens Yes ___ No ___

Carcinogens Yes ___ No ___

Animals Yes ___ No ___
(If animals are used, complete page 4,
"Animals Care Information.")

If the answer to any of these is yes, identify and outline deactivation and protection measures for radiation safety personnel in (4) below.

3. What kind of radioactive waste will be generated?

Activity, Volume, or Number
Per Year

- Aqueous Waste _____
- Other Liquid; Describe _____

- Liquid Scintillation Vials _____
- Animal Carcasses _____
- Solid (dry) _____
- Gas/Vapor (e.g., iodine) _____
- Environmental release; Describe _____

- Other; Describe _____

4. Outline experimental protocol with particular attention to health and safety aspects of the proposed use. Use additional sheets if necessary.

Proposed Use, Sealed Sources Only

Complete this part for each sealed source requested. (Other than low-activity check and calibration sources.)

1. Radionuclide _____

2. Activity _____ Date Calibrated _____

3. Manufacturer _____ Model No. _____

4. Serial No. _____ Other ID No. _____

5. Shield: Applicable Yes No

Manufacturer _____ Model No. _____

Serial No. _____ Other ID No. _____

6. Describe what source is to be used for. Describe health and safety considerations and protective measures to be taken. Discuss associated dose rates, interlocks, signs and labels, access control, maintenance as applicable.

Equipment and Facilities

a) Check available instruments and equipment:

- | | |
|--|---|
| <input type="checkbox"/> Radioactive Fume Hood (Room # _____) | <input type="checkbox"/> Portable radiation survey instrument |
| <input type="checkbox"/> Disposable gloves | <input type="checkbox"/> Liq. scint. counter |
| <input type="checkbox"/> Lab coats | <input type="checkbox"/> Gamma counter |
| <input type="checkbox"/> Trays to contain spills | <input type="checkbox"/> Appropriate signs, tape and labels |
| <input type="checkbox"/> Remote pipettes (i.e., not by mouth) | <input type="checkbox"/> Shielding materials |

Other: _____

b) Attach a floor plan of areas where radioactive materials are used or stored, showing fixtures such as sinks, hoods, benches, cold rooms, etc., and major pieces of equipment and furniture, such as liquid scintillation counters, refrigerators, desks, radwaste containers, etc. Indicate work areas, radioactive material storage, radwaste storage, entrances and exits. Include room numbers.

c) If using animals, describe interim storage of frozen carcasses.

Security and Emergency Procedures

a) What provisions have been made to insure that main stock of radioactive materials is secure from unauthorized persons?

b) What plans have been made by applicant for decontamination in case of spill or accident?

c) List at least 2 phone numbers to be called after hours in case of emergency?

Name _____ Phone _____

Name _____ Phone _____

Signature below affirms that the applicant has read and will comply with the rules, regulations and procedures set forth by Hamilton College Radiation Safety Committee and Radiation Safety Officer. The applicant accepts the responsibility for maintaining current knowledge of such rules, regulations, and procedures, and for promptly informing the Committee of any changes in use, including prolonged absence, termination, moving of lab, personnel changes, etc. Also please note the following items:

1) Laboratory areas where radioactive materials are used or stored must be monitored for radioactivity in accordance with the radiation safety manual. Such monitoring must be recorded even if no contamination is found.

2) Records must be kept to show the disposition of all radioactivity, from stock to radwaste or decay.

3) Authorized Users are responsible for insuring that all individuals working with radioactive materials have been instructed in the radiation protection problems and appropriate precautions to minimize exposure associated with the radionuclides to be used. This instruction must be documented.

Signature _____

FORM RSO-3

Monthly Survey Report

Directions: Fill out a copy of this cover sheet each month, sign, attach to a copy of the monthly radiological survey which was performed (as applicable) and submit to the Radiation Safety Officer for review.

Date: _____ Laboratory: _____

Building: _____ Department _____

Authorized User: _____

Radioisotopes used during the month: (circle)

H-3 C-14 S-35 Na-22 I-125 P-32 U-238 None

Other: _____

Signatures

Survey conducted by: _____ Date _____

Authorized User: _____ Date _____

Radiation Safety Officer: _____ Date _____

FORM RSO-6

Radiological Survey Floor-Plan

Job Location _____ Page ____ of ____

Survey Purpose _____ Date _____

Performed By _____
(Print) (Sign)

Swipe Location = ○
Air Sample Location = □
Frisk Location = |||
Radiation Survey Location = Radiation
Reading in mR/h - μ R/h (circle one)

FORM RSO-7

Sealed Source Leak Test Record

For the source to be leak tested:

Source Manufacturer:

Source Isotope:

Source Model No.:

Source Quantity:

Source Serial No.:

Date of Wipe Test:

Person performing wipe test:

Instrument used to analyze:

Calibration due date:

Minimum Detectable Activity:

Total cpm	Background cpm	Efficiency	dpm	Activity (μ Ci)

SEALED SOURCE LEAK TEST CERTIFICATION

This is to certify that a wipe test performed on the above-named source indicates the presence of _____ μ Ci of total removable radioactivity.

Person Performing the Analysis:

Date of Analysis:

Reviewed By RSO:

FORM RSO-10

Quarterly Radioactive Material Physical Inventory Record

Name of Authorized User: _____

Department: _____ Building: _____ Room: _____

Directions: Physically inventory all of the radioactive materials that you have in your possession. This is to include stock solutions, sealed sources, cultures or waste. You must complete this inventory at the end of every calendar quarter even if no radioactive material was received or disposed of during this period. Attach additional sheets as necessary and submit to the Radiation Safety Officer.

Radionuclide Inventory

Radionuclide	Chemical/Physical Form	Activity (mCi)

Radionuclide Waste Disposal (i.e., what you've disposed of over the past 6 months, if none, write "NONE.")

Radionuclide	Liquid Sanitary Sewer (mCi)	Liquid - Other (mCi)	Solid (mCi)	Gas/Vapor (mCi) (i.e., fume hood)

Date: _____ Performed By: _____

FORM RSO-12

Radioactive Material Use and Disposal Record

This form is suggested to maintain a record of unsealed radioactive material use and disposal. It should be completed by the Authorized User as the radioactive materials are used and kept permanently on file. The total activity must be accounted for. If this shipment is transferred to another Authorized User, a copy of this sheet must accompany the transferred material. Any transfer must have prior RSO approval.

Authorized User: _____

Radionuclide: _____ Activity: _____ as of (date) _____

Form: _____ Mfg: _____ Lot No.: _____

Comments: _____

Date/Time	Disposition				
	Description of Use * (Specify for each entry in an "Activity" column)	Activity			Type of waste **
		In Expert. use (mCi)	Balance in stock (mCi)	To waste (mCi)	
	Delivered to Authorized User	xxxxxx		xxxxxx	xxxxxx
Total Activity to Waste					

* For Example: experiment, waste disposal, injected into rats, etc.
 ** 1 = solid; 2 = aqueous waste; 3 = liquid scintillation vials; 4 = animal carcasses; 5 = gas to air; 6 = other (specify)