

# APPLICATION FOR NEW INVESTIGATORS PURCHASE AND USE RADIATION

Last Name	First	Gender	SS#	DOB

Department	Office room #	Building	Phone#

E-mail Address	Your Job Title

**HIGHEST ACADEMIC DEGREE:**

Masters \_\_\_ Ph.D. \_\_\_ M.D. \_\_\_ Other: \_\_\_\_\_

**RADIATION USE: (please check all that you expect to work with within 12 months)**

P-32 \_\_\_ Cr-51 \_\_\_ Fe-59 \_\_\_ I-125 \_\_\_ Other \_\_\_\_\_ (badge and ring needed)  
 H-3 \_\_\_ C-14 \_\_\_ P-33 \_\_\_ S-35 \_\_\_ Ca-45 \_\_\_ Fe-55 \_\_\_ Other \_\_\_\_\_ (no badge and ring)

**Other Radiation Devices:**

Analytical X-ray \_\_\_ Medical X-ray \_\_\_ Veterinary X-ray \_\_\_ Cabinet X-ray \_\_\_  
 Cesium Blood Cell Irradiator \_\_\_ Biological x-ray irradiator \_\_\_ Electron Microscope \_\_\_  
 Other: \_\_\_\_\_

**LIST PRACTICAL EXPERIENCE WITH RADIATION:**

Year	Institution, location	Radionuclides or radiation device	Activity used
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**LIST RADIATION LECTURES/COURSES YOU HAVE ATTENDED:**

Year	Hours	Location	Topics
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**BUDGET FOR RADIATION RELATED CHARGES: (personnel monitoring, waste disposal, etc.)**

Number: \_\_\_\_\_ Exp. Date: \_\_\_\_\_

**HOW DO YOU FEEL ABOUT WORKING WITH RADIATION?**

No Concerns \_\_\_\_\_

My Concerns are: \_\_\_\_\_

**PRIOR RADIATION DOSIMETER USE:**

Did you wear a whole body badge and/or ring at **another** institution? Yes \_\_\_\_\_ No \_\_\_\_\_

If you did, please fill out the attached **Radiation Exposure History** form.

**PRIOR AUTHORIZATION:**

Were you authorized or licensed as a principle investigator to purchase and use radioactive materials or radiation producing devices?

No \_\_\_\_\_

Yes \_\_\_\_\_ Attach a copy of any documentation relative to your previous authorization. If none, please fill out the following information:

Institution: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

**CURRENT PERSONNEL:**

List persons currently on your staff or students that will handle radioactive materials or use radiation producing devices under your authorization:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Note: Each person must get authorized to use radiation if they have not already done so.*

**RADIOACTIVE WASTE DISPOSAL:**

Identify the types of radioactive waste that you expect to generate:

[ ] Dry solids (paper, plastic, glass, gloves, etc.) [ ] Bulk liquids

[ ] Animal carcasses [ ] Liquid Scintillation vials

If using short half-life (less than 90 days) radioactive materials do you plan to store the waste in your lab until it decays to "background"? No \_\_\_\_\_ Yes \_\_\_\_\_

Est. annual expenditures for radioactive waste disposal? \_\_\_\_\_ (current price list attached)

**LOCATION OF RADIATION USE:**

Identify the room(s) and building where radiation will be used. Is This Shared

Room #	Building	Shared Lab Space?		With?
_____	_____	<input type="checkbox"/> No	<input type="checkbox"/> Yes	_____
_____	_____	<input type="checkbox"/> No	<input type="checkbox"/> Yes	_____
_____	_____	<input type="checkbox"/> No	<input type="checkbox"/> Yes	_____
_____	_____	<input type="checkbox"/> No	<input type="checkbox"/> Yes	_____

Who will be responsible for contamination surveys in your labs? \_\_\_\_\_

**RADIATION DETECTION:**

Describe the radiation detector(s) that you will use to conduct contamination surveys in your lab(s).

Manufacturer	Model	Type of Detector
_____	_____	_____
_____	_____	_____

**RADIONUCLIDES or RADIATION PRODUCING DEVICES:**

List the requested radionuclides and each possession limit.

Radionuclide	Requested Limit (millicuries)	Radionuclide	Requested Limit (millicuries)
1. _____	_____	4. _____	_____
2. _____	_____	5. _____	_____
3. _____	_____	6. _____	_____

For radiation producing devices please list the device(s) and type(s).

Device	Type	Location
_____	_____	_____
_____	_____	_____
_____	_____	_____

The above radiation will be administered to or used on:

live animals                       animal tissue

live humans

human tissue

other (describe): \_\_\_\_\_

Briefly describe the purpose for using radiation in your research: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

I agree to follow all procedures in the **RADIATION SAFETY HANDBOOK** as well as all other applicable documents indicated by the Radiation Safety Office:

\_\_\_\_\_  
Signature, Investigator

\_\_\_\_\_  
Date

**FEMALE APPLICANTS**

I received a copy of the University of Vermont's Pregnancy Policy entitled; "Instruction Concerning Prenatal Radiation Exposure".

\_\_\_\_\_  
Signature, Applicant

\_\_\_\_\_  
Date

**FOR RSO USE ONLY**

No Whole Body Badge Needed

Whole Body Badge Needed:

Landauer Series # \_\_\_\_\_

Whole Body Badge

Ring (Finger) R hand  L hand

Size:  Small  Medium  Large

Pelvic

Ankle

Neutron

Send for Whole Body Badge History

Add to PIF Data Base

RK: \_\_\_\_\_ Met On \_\_\_\_\_

TK: \_\_\_\_\_ Met On \_\_\_\_\_

KB: \_\_\_\_\_ Met On \_\_\_\_\_

LI: \_\_\_\_\_ Memo to Investigator re this user \_\_\_\_\_

Applicant's name: \_\_\_\_\_

**A: UNSEALED RADIATION SOURCES**

Date Exam Passed \_\_\_\_\_

Exam Score: \_\_\_\_\_

Certificate Number: \_\_\_\_\_

**B: CESIUM-137 IRRADIATOR**

I reviewed the SOP for the Cs-137 Gammacell irradiator with the applicant.

\_\_\_\_\_  
*RSO signature* *Date*

This person was trained and tested by me and completed all requirements on: \_\_\_\_\_

\_\_\_\_\_  
*\* Pat O'Neill* *Date*

*\* please sign and return to the RSO, 004 Rowell*

**C: IODINATIONS**

I reviewed the SOP for iodinations with the applicant and the iodination exam was taken and reviewed.

\_\_\_\_\_  
*RSO signature* *Date*

I received a copy of the "Thyroid Burden Violation Policy of the RSC" dated 9/14/88 and I agree to follow the SOP for iodinations.

\_\_\_\_\_  
*Applicant's signature* *Date*

**D: RADIATION PRODUCING DEVICE**

I reviewed radiation safety practices for radiation producing device users with the applicant.

\_\_\_\_\_  
*RSO signature* *Date*

This person has been trained by me or my designee on the proper use and safety features of the radiation producing device being used.

\_\_\_\_\_  
*\* Supervisor's signature* *Date*

*\* please sign & return to the RSO, 004 Rowell*

**RADIATION EXPOSURE HISTORY REQUEST FORM**

PHONE: 802-656-2570

FAX: 802-656-8876

TO: Radiation Safety Office

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

In compliance with the Code of Federal Regulations, Title 10, Part 19, please mail or fax the exposure history of:

Name: \_\_\_\_\_

Social Security Number: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

Employed From: \_\_\_\_\_ to \_\_\_\_\_

to the following:

Keddy Bharathan, Associate Director  
Radiation Safety Office  
University of Vermont  
106 Carrigan Drive  
Room 004 Rowell Building  
Burlington, VT 05405

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I hereby authorize the release of my radiation exposure history to the University of Vermont Radiation Safety Office:

\_\_\_\_\_  
Signed

\_\_\_\_\_  
Date

## RADIOACTIVE WASTE DISPOSAL PRICE LIST

(as of 7/1/04)

### Liquid Scintillation Waste: (Vials or Bulk Liquid)

- A. Exempt Category – scintillation fluid with  $^3\text{H}$  or  $^{14}\text{C}$  ( $\leq 0.05$  uCi/ml)
- B. Mixed Category – scintillation fluid with isotope  $\leq 109$  day half-live
- C. Regulated Category in biodegradable scintillation fluid  $\geq 110$  day half-live

Vial Size	Exempt	Mixed / Regulated
4 ml	\$12.60 /100 vials	\$48.50 /100 vials
6 ml	\$21.35 /100 vials	\$72.75 /100 vials
7 ml	\$24.25 /100 vials	\$85.35 /100 vials
10 ml	\$34.90 /100 vials	\$122.30 /100 vials
20 ml	\$69.85 /100 vials	\$244.45/ 100 vials

D. Bulk Liquid Scintillation Fluid

Exempt, Organic Scintillation Fluid	\$24.25 /gallon
Mixed/Regulated, Organic Scintillation Fluid	\$169.75 /gallon
Exempt/Mixed/Regulated, Biodegradable Fluid	\$77.60 /gallon

### Waste Stored For Decay: *Isotopes with a half-life less than 90 days stored for decay.*

Isotopes	Solid Lab Trash	Bulk Liquid
P-32 or half-lives $\leq 14$ days	\$ 7.10 /gallon	\$ 9.75 /gallon
Cr-51, I-125 or half-lives between 14-65 days	\$12.60 /gallon	\$14.70 /gallon
S-35 or half-lives between 65-90 days	\$15.80 /gallon	\$17.85 /gallon

Incineration of Decay-in-Storage: (When decayed by labs) - \$1.65 /pound

### Long-Lived Waste: *All isotopes with a half-live greater than 90 days.*

Category	Cost
Dry Lab Trash	\$58.20 /gallon
Bulk Liquid (non-hazardous)	\$77.60 /gallon
Animal Carcasses / Biological Tissue	\$58.20 /gallon

**Please call the RSO at 656-2570 to make an appointment for a waste pickup.**