

Instructions for Completing the Application for New Radioactive Material Approval

SECTION 1: General Applicant Information

Fill in all sections.

The Radiation Safety Coordinator (RSC) is a radiation worker appointed by the Approval Holder who is entrusted to monitor and manage the radioactive material (RAM) use in the laboratory and to act as a liaison between the Approval Holder and the Radiation Control Office (RCO).

SECTION 2: Radioactive Material Use/Storage Locations

List and describe all rooms where you will be using and storing radioactive materials. For “Types of Room”, select one of the following: Cold Room, Dark Room, Laboratory, Common Equipment Room, Storage, Field Site, or Other.

SECTION 3: Radionuclide and Activity Information

List only radionuclides that you intend to begin using immediately, future nuclides can be added via the approval amendment process. The activity you request for each nuclide must realistically reflect actual RAM usage; enough to accommodate lab stock, pending orders and waste disposal. The Radiation Safety Committee may reduce radionuclide activity requests that seem higher than justified based upon information supplied in the application.

SECTION 4: Previous Radiation Safety Training*

Provide complete information.

SECTION 5: Radioactive Material Experience*

Be very specific with the information that you provide. List all radionuclides.

*Insufficient training or experience may result in a requirement to work under the supervision of an existing Approval Holder or granting of a conditional approval, i.e. working with limited amounts of activity, receiving additional training, and more frequent audits. Two or more years experience with radionuclides similar to those being requested in the application is considered sufficient.

SECTION 6: Exempt Protocols

By using the exempt protocol option, applicant certifies that the uses of radioactive materials selected do NOT involve any of the following:

- (a) volatilization potential or any potential release to room air or the atmosphere,
- (b) field tests,
- (c) use of animal subjects/tissue under jurisdiction of Institutional Animal Care and Use Committee (IACUC),
- (d) use of human subjects/tissue/bodily fluids under jurisdiction of Human Subjects Committee,
- (e) work involving Biosafety Level 2, 3, or 4 procedures.
- (f) protocols performed more than 15 times per month, or
- (g) protocols exceeding the Single Procedure Exemption Limit outlined in the exempt protocol list.

Fill in all sections for each protocol. The Protocol Code can be found on the [Exempt Protocol List](#). One protocol can have multiple nuclides and/or chemical forms listed. Include the activity for each protocol and approximate number of times the protocol will be performed each month. Once the application is submitted the RCO will ensure you have the appropriate ALARA equipment for each protocol. This equipment includes, but is not limited to, shielding, hoods, and safety cabinets.

Exempt Protocol List (To be used for Section 6)

Protocol Code	Protocol	Single Procedure Exemption Limit
E01	Calibration Standards	500 μ Ci
E03	Hybridizations: <i>In situ</i> Hybridizations, CAT Assays Blots: Northern, Slot, Southern, Western	500 μ Ci
E04	<i>In-vitro</i> Labeling of Nucleotides: End Labeling, Nick Translation, Random Prime Labeling, DNA Sequencing (Sanger method)	500 μ Ci
E05P	<i>In-vivo</i> Labeling Nucleotides in Plants.	1 mCi
E05M	<i>In-vivo</i> Labeling Nucleotides in Microorganisms.	
E05I	<i>In-vivo</i> Labeling Nucleotides in Insects.	
E06	<i>In-vitro</i> Labeling of Proteins: Translation	500 μ Ci
E07P	<i>In-vivo</i> Labeling of Proteins in Plants.	1 mCi
E07M	<i>In-vivo</i> Labeling of Proteins in Microorganisms.	
E07I	<i>In-vivo</i> Labeling of Proteins in Insects.	
E08	Radioimmunoassay (RIA)	500 μ Ci
E09	Receptor Binding Assays	500 μ Ci
E10	Sequencing Gels	500 μ Ci
E11	Transcription	500 μ Ci
E12	Autoradiography	500 μ Ci
E14	<i>In-vitro</i> Labeling of Sugars	500 μ Ci
E15	Polymerase Chain Reactions	500 μ Ci
E16	Enzyme Assays	500 μ Ci

SECTION 7: Non-Exempt Protocol for Use of Radioactive Materials

If you will be performing any protocols not specifically listed as an exempt protocol, or if your exempt protocol will exceed the Single Procedure Exemption Limit in a single procedure, complete Section 7 in its entirety. In the blank area, provide a brief description of your experiment, include the following information: the chemical reactions involved, physical manipulations and laboratory techniques, such as centrifugation, scraping, freeze drying, incubation, aerosolization, volatilization, filtrations, titrations, precipitations, evaporation, types of chromatography, electrophoresis, cell harvesting, etc. Include information about the radionuclide activity per sample, average number of samples run in a typical experiment, and the anticipated frequency that the experiment will be performed. Also, include a description of the experimental protocol, such as information about storage of RAM and RAM waste, availability and use of shielding for each type of radionuclide to be used, radiation detection instruments, and use of fume hoods or safety cabinets.

Submit your protocols on the page provided, and enter only one protocol per page. Use continuation pages as needed.

SECTION 8:

To be signed by the applicant.

THE UNIVERSITY OF ARIZONA
APPLICATION FOR NEW RADIOACTIVE MATERIAL APPROVAL

RCO Only HP Review _____

SECTION 1: GENERAL APPLICANT INFORMATION

Approval Holder					
	First Name	MI	Last Name	Degree	Phone Number
Department		Office Building Name	Room Number	E-Mail	
Radiation Safety Coordinator	First Name	Last Name	E-Mail	Phone Number	

SECTION 2: RADIOACTIVE MATERIAL USE/STORAGE LOCATIONS

Building Name	Bldg #	Room Number	Type of Room*

*Type of Room - choose one: Cold Room, Dark Room, Lab, Common Equipment Room, Storage, Field Site, Other

SECTION 3: RADIONUCLIDE AND ACTIVITY INFORMATION

Radionuclide						
Max Possession Activity Request	mCi	mCi	mCi	mCi	mCi	mCi

SECTION 4: PREVIOUS RADIATION SAFETY TRAINING

Institution	Course Title or Description	Course Length

SECTION 5: RADIOACTIVE MATERIAL EXPERIENCE

Institution	Dates (From-To)	Radionuclide(s)	Experiments Performed
	-		
	-		
	-		
	-		

SECTION 6: EXEMPT PROTOCOLS (See “Exempt Protocol List” in the instructions for code and limitations)

An exempt protocol presents minimal hazard when the exemption limit is not exceeded. If limits are exceeded, or protocol is not on list, use form for non-exempt protocols.

Protocol Code	Radionuclide(s)	Chemical Form(s) Use online Chemical Form List http://www.radcon.arizona.edu	Activity per Protocol	Procedure Frequency (#/mo)

SECTION 7: NON-EXEMPT PROTOCOL FOR USE OF RADIOACTIVE MATERIALS

See page 3 of application. Use one form for each non-exempt protocol submitted.

SECTION 8: It is understood that the applicant named herein, upon approval of this application, assumes responsibility for the use of radioactive material assigned to him/her in strict compliance with the rules and regulations administered by the University Radiation Safety Committee, or the Medical Radiation Safety Committee, the Radiation Control Office (RCO), and the Arizona Radiation Regulatory Agency. The applicant must ensure that their staff is properly trained to handle, dispose of and secure radioactive material in accordance with the “Radiation Training Policy”, “Basic Laboratory Procedures for Unsealed Radioactive Materials” and “Rules for Packaging Radioactive Waste”, prior to beginning any work with radioactive materials. Applicants may not delegate this responsibility to any other person.

Applicant is aware that quantities greater than 50nCi per month will not be released into the environment (via sink or hood) without prior consent from the RCO.

Further, the applicant is aware that any fines or civil penalties levied by any regulatory authority because of deficiencies in work being performed under the applicant’s Approval will be paid out of the applicant’s departmental funds. (This authority is based upon a directive from the Vice President for Research, Graduate Studies and Economic Development.)

Signature: _____ Date: _____

SECTION 7: NON-EXEMPT PROTOCOL FOR USE OF RADIOACTIVE MATERIALS

Protocol # _____ RCO use only.	Protocol Frequency (# per month): _____
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Protocol Name:

Radionuclide:	Chemical Form(s):	Max Activity Per Experiment:
Radionuclide:	Chemical Form(s):	Max Activity Per Experiment:

Before work can begin, approval from other committees such as: the Institutional Animal Care Use Committee, the Institutional Biosafety Committee, and the Human Subjects Committee, may be required.