

YALE UNIVERSITY
Application For The Use Of X-Ray Equipment

Instructions: This form should be completed by the PI who is responsible for x-ray generating equipment. Send all completed forms via e-mail or through campus mail to: Radiation Safety / EHS, 135 College Street, Attn: X-Ray Authorization. Questions? Call 737-2118 or 785-3550

1a. **Principal Investigator:** **Net ID:**

Office Address: **Telephone:** **Department:**

E-Mail Address:

1b. **X-Ray Equipment Manager:** **Net ID:**

E-Mail Address: **Telephone:**

2a. Equipment Information

Manufacturer

Model

Serial #

2b. Type of X-ray Unit

- Cabinet X-Ray X-Ray Diffraction X-Ray Fluorescence Computed Tomography micro CT
- Electron Beam Bone Density C-Arm Fluoroscope Portable X-Ray General Purpose
- Luminoscope micro Bone Density micro PET/CT Teletherapy (Analytical) Dual Anode X-Ray
- mini C-Arm Other - describe

2c. Output

Maximum Voltage (kV) Normal Operating Voltage (kV)

Maximum Current (mA) Normal Operating Current (mA)

2d. Safety Features

- Beam On Indicators Shutter Open Lights Interlocks
- Other Describe

3a. X-Ray Facility Location - List all rooms in which x-ray equipment will be used or stored

3b. X-Ray Facility Devices and Safety Equipment - Select safety devices/equipment to be used in your lab

- Caution Signs and Labels Personal Dosimeters (badges) Posted Standard Operating Procedures
- Lead aprons Lead Gloves Lead Thyroid Shields
- Survey Meter Manufacturer Probe Type Location
- Other - describe

4. **Will any of the following items be used in conjunction with the x-ray equipment?**

Biohazards / Pathogens No Yes If "yes," list details below.

(EX: Viruses, bacteria, human cell lines, etc....)

Hazardous Chemicals No Yes If "yes," list details below.

(EX: methanol, phenol, chloroform, benzene, toluene, toxins, heavy metals, etc...)

5. **Will the unit be used on or with live animals?**

No Yes If "yes," make sure to include a detailed protocol in section 7 and answer the following:

Approved IACUC Protocol Number

Species of Animal

6. **Purpose:** Indicate the main purpose for using this equipment. Indicate what general types of experiments will be performed with this unit.

7. **Project Methodology:** Outline the methodology of the project emphasizing the safe use of the x-ray unit. Provide a copy of the written operating procedures that will be available to all users of the x-ray equipment. Consider steps in your protocol which are potentially hazardous or may generate significant dose rates. Will beam alignments need to be made in the presence of the beam? If you need more room, please attach a document to this application and write "see attached" in the area below.

5b. **Security Procedures:** Outline a precautionary procedure that will prevent the unauthorized use of the x-ray equipment.

Confirm that the laboratory is kept locked when no one is present. Describe how key control or other operational safeguards secure the unit(s).

5c. **Maintenance and Repair:** Explain who is authorized to maintain and repair the unit.

Maintain records of all repairs performed on the unit.

5d. **Emergency Response:** Outline your written plans for immediate control of x-ray radiation related incidents. In case of an accident, or known or suspected x-ray exposure, contact Radiation Safety/EHS by calling the **Emergency Line at 785-3555** immediately.

