

LICENSING ACTINIUM-225 AND ACTINIUM-227

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March 21, 2023

ACTINIUM ISOTOPES

	Actinium-225	Actinium-227
Half-life	10 days	21.7 years
Annual limit on intake	0.3 microcuries	0.0004 microcuries
Financial assurance threshold	Not required	10 microcuries

ACTINIUM LICENSEES IN WISCONSIN

Benchtop Research

Animal Studies

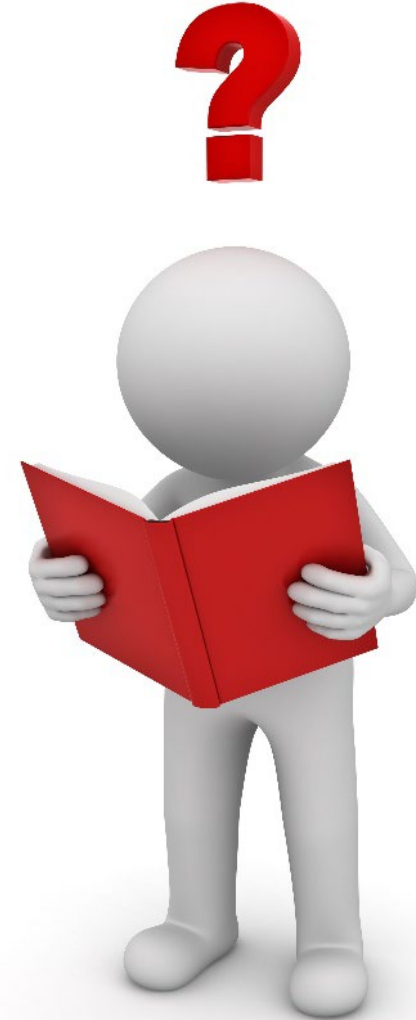
Production
Facility Design

Medical Use

Radiopharmacy

RADIATION SAFETY CONSIDERATIONS

- Contamination
- Chemical separation
- Bioassay
- Engineering controls
- Action levels
- Skin overexposure
- Training
- Waste disposal



RADIATION SAFETY FOR END USERS

- Contamination
 - Chemical separation
 - Bioassay
 - Engineering controls
 - Action levels
 - Skin overexposure
 - Training
 - Waste disposal
- Day of use wipe surveys
 - No separation
 - Did not require bioassay
 - Required controls
 - As low as reasonable
 - Double gloves
 - Isotope-specific training
 - Decay-in-storage

ACTINIUM PRODUCTION

Limit impurities

Manage radium

Control radon

Manage waste

Limit areas of use
and storage

Challenges

ACTINIUM PRODUCTION CONSIDERATIONS

- Decommissioning funding plan
- Environmental monitoring
- Emergency planning
- Radium security requirements

