



Environmental Health and Safety
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Thallium (Tl-204)

Half Life: 3.8 years

Radiation: Beta decay and gamma rays

Shielding: 4 cm lead for gamma emission, 1 mm plastic will absorb beta

Dosimetry: Body and ring badges

Detection/Measurement: GM probe (pancake) and wipe tests

General Precautions:

Maintain your occupational exposure to radiation As Low As Reasonably Achievable [ALARA]

All persons handling radioactive material must be properly trained by EHS prior to handling and are listed as a rad worker by EHS department

Plan experiments accordingly to minimize external exposure by reducing exposure time, using shielding and increasing your distance from the radiation source

Monitor yourself and the work area during and after each use of radioactive material

Use the smallest amount of radioisotope possible to minimize radiation dose and radioactive waste

Keep an accurate inventory of all radioactive material including records of all receipts, transfers and disposal – contact EHS for any disposal needs including liquid waste

Perform and record lab surveys as needed (monthly and post experiment)

Avoid generating mixed waste (combinations of radioactive, biological and chemical waste)

Special Precautions: