

 β

Beta Energy: 49 keV average (156 keV max)
 Range in Air: 10 inches
 Range in Lucite: 0.010 inches
 Shielding: None required (mCi quantities
 external radiation hazard)

Critical Organ: Fat tissue, bone

Exposure Routes: inhalation, ingestion,
 skin absorption
 Dosimetry¹: None
 required

Bioassay:¹ Urine²

Detection & Measurement

GM Pancake: Low efficiency (~3%)

Liquid Scintillation Counting — smear test
recommended

Half Life

Physical: 5730 years
 Biological: 12 days
 Effective: 12 days (bound)
 40 days (unbound)

T
1/2

Special Precautions:

- ⚠ ¹⁴C compounds may penetrate gloves and be absorbed by skin —
 - ⚠ handle such materials remotely;
 - ⚠ use double gloves;
 - ⚠ change external gloves frequently;
- ⚠ Shielding: None required (mCi quantities \neq external radiation hazard);
- ⚠ Wipe or smear work areas to monitor for contamination;
- ⚠ Perform self-survey/hand frisking very slowly.

Personal
Protective
Equipment



Disposal: Segregate from <90 day T_{1/2} waste. Do not commingle with 'decay in storage' wastes.

1. Dosimetry and bioassay are not required for <5 mCi monthly ¹⁴C use.

2. Urine bioassay may be required after any accident/incident where intake is suspected.