



β

Beta Energy: 167.47 keV maximum,
48.8 keV average
Range in air: 10.2 inches
Range in lucite: 0.010 inches
Shielding: None required, lucite
recommended

Critical Organ: Testis
Exposure Routes: inhalation, ingestion,
skin absorption
Dosimetry¹:
None required
Bioassay:¹ Urine²

Detection & Measurement

GM Pancake: low efficiency, ~10%
Liquid Scintillation Counting — smear test
recommended

T_{1/2}

Half Life
Physical: 87.4 days
Biological: 623 days (unbound ³⁵S)
Effective: 44-76 days
(unbound ³⁵S)

Special Precautions:

- ⚠ The weak beta emission does not pose an external hazard (range in skin: 0.015 inches)
- ⚠ ³⁵S can be absorbed through the skin if the chemical carrier presents a skin absorption hazard — use remote handling techniques;
- ⚠ Use of volatile ³⁵S compounds outside of fume hoods is not permitted;
- ⚠ Be cautious that ³⁵S labeled compounds do not become volatilized;
- ⚠ Use double gloves and change the external pair frequently.

Personal
Protective
Equipment



Disposal: Decay in Storage

1. Dosimetry and bioassay are not required for <5 mCi monthly ³⁵S use.

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