

 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

Half Life

Physical: 87.4 days

Biological: 623 days (unbound ³⁵S)Effective: 44.76 days
(unbound ³⁵S) $T_{1/2}$

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.