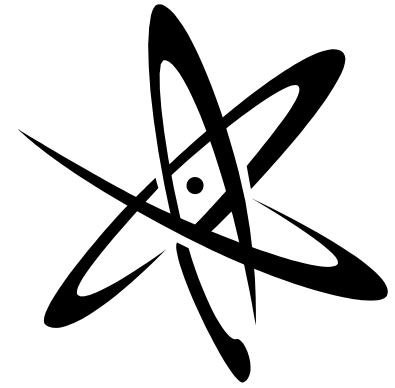


Tritium



Characteristics

- Radioactive half-life: 12.4 years
- Decay mechanism: Beta emission
- Energy: $E_{\max} = 18.6 \text{ keV}$
 $E_{\text{avg}} = 6 \text{ keV}$
- Contamination monitoring: Liquid scintillation counter for wipe surveys
- Dosimetry: Urinalysis

Detection Difficulty

- Because the beta emitted has a very low energy, tritium can not be detected with the usual survey meters found in the lab.
- Special care is needed to keep the work area from becoming contaminated.
- Tritium can be detected by doing a wipe survey and counting the wipes in a liquid scintillation counter,

Diffusiveness

- Many tritiated compounds readily penetrate gloves and skin.
- Wearing two pairs of gloves and changing the outer pair every fifteen or twenty minutes will reduce the chances of cross contamination and absorption through the skin