>>**Entry Name: Ytterbium**

CAS Registry Number: 7440-64-4
Related CAS Registry Numbers(s): 18923-27-8 20205-78-1 22541-96-4

Yb

Molecular Formula: Yb
Molecular Weight: 173.04
Accurate Mass: 171.935378
Percentage Composition: Yb 100.00%

known of which 7 are natural and ^{174}Yb (*ca*. 32%) is the most abundant. α-Form (fcc) transforms into β-form (bcc) at 800°. Abundance 3 ppm (earth's crust)
Source/Synthesis: Ores include monazite and euxemite. Metal obt. by metallothermic redn. of trihalides or the oxide Yb_2O_3
Use/Importance: ^{169}Yb used as medical radiotracer
Physical Description: Soft, malleable, ductile silvery metal; somewhat air- and moisture-sensitive; attacked by dil. and conc. mineral acids
Melting Point: Mp 819°
Boiling Point: Bp 1196° (1193°)
Other Data: Some tendency to divalency
Hazard & Toxicity: No reports of toxicity: may have anticoagulant props.

Aldrich: 26130-0
Fluka: 95770

>>**Variant: Ytterbium 160**

CAS Registry Number: 25731-71-9

Source/Synthesis: Prod. by bombardment of ^{124}Te with ^{40}Ar, or Ta with protons
Other Data: *I* = +0. Decays by orbital electron capture or $\beta^{(+)}$ emission to ^{160}Tm

>>**Variant: Ytterbium 162**

CAS Registry Number: 24347-38-4

Source/Synthesis: Prod. from Er (He,5n), ^{66}Er (^{3}He,7n), or ^{169}Tm (p,8n). Also obt. by bombardment of Ta with protons, or Er with α-particles
Other Data: *I* = +0. Decays by orbital electron capture or $\beta^{(+)}$ emission to ^{162}Tm

>>**Variant: Ytterbium 164**

CAS Registry Number: 14834-82-3

Source/Synthesis: Prod. from Tm (p,6n), ^{166}Er (^{3}He,5n), or by proton bombardment of Ta
Other Data: *I* = +0. Decays by orbital electron capture to ^{164}Tm

>>**Variant: Ytterbium 166**

CAS Registry Number: 14834-83-4

Source/Synthesis: Prod. from Tm (p,4n), also by proton bombardment of U or Th
Other Data: *I* = +0. Decays by orbital electron capture to ^{166}Tm

>>**Variant: Ytterbium 167**

CAS Registry Number: 14041-45-3

Source/Synthesis: Prod. from Tm (p,3n), Er (α,n), ^{168}Yb (d,t), or ^{168}Yb (γ,n). Daughter of ^{167}Lu
Other Data: *I* = - 5/2 ; μ = +0.62 μ_N. Decays by orbital electron capture (99.5%) or $\beta^{(+)}$ emission (0.5%) to ^{167}Tm

>>**Variant: Ytterbium 168**

CAS Registry Number: 15743-54-1

Other Data: *I* = +0