



>>Entry Name: Holmium

CAS Registry Number: 7440-60-0

Related CAS Registry Numbers(s): 22541-22-6

Ho

Molecular Formula: Ho

Molecular Weight: 164.93

Accurate Mass: 164.930319

Percentage Composition: Ho 100.00%

Abundance: 1.4 ppm (earth's crust). Discovered in 1878-1879 by P.T. Cleve (Uppsala) and M. Delafontaine and J.L. Sonet (Geneva). α -Form (hcp) converts into β -form (bcc) at just below Mp. A high pressure form also exists

Source/Synthesis: Main ores are monazite and bastnaesite. Metal obt. from HoCl_3 and HoF_3 with Ca

Physical Description: Soft, malleable bright silvery metal, stable in dry air, reacts with H_2O , sol. in dil. acids

Melting Point: Mp 1474° (1461°)

Boiling Point: Bp 2700° (2600°)

Aldrich: 45795-7

Fluka: 53430

>>Variant: Holmium 163

CAS Registry Number: 14391-21-0

Source/Synthesis: Daughter of Er

Other Data: $I = -7/2$; $\mu = +4.23 \mu_N$. Decays by orbital electron capture to ^{163}Dy

>>Variant: Holmium 165

Other Data: $I = -7/2$; $\mu = +4.173 \mu_N$. Nmr relative sensitivity ($^1\text{H}=1.00$) 0.18; receptivity ($^{13}\text{C}=1.00$) 1160

>>Variant: Holmium 166

CAS Registry Number: 13967-65-2

Source/Synthesis: Prod. from Ho (n, γ) (commercial production route). Daughter of ^{166}Dy

Other Data: $I = +0$. Decays by $\beta^{(-)}$ emission to ^{166}Er

>>Variant: Holmium 166m

Source/Synthesis: Prod. from Ho (n, γ) (commercial production route)

Other Data: $I = -7$; $\mu = 3.6 \mu_N$. Decays by $\beta^{(-)}$ emission to ^{166}Er

References:

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