



>>Entry Name: Ytterbium chloride (YbCl₃)

Synonym(s): Ytterbium trichloride

CAS Registry Number: 10361-91-8

Related CAS Registry Numbers(s): 83596-27-4

YbCl₃

Molecular Formula: Cl₃Yb

Molecular Weight: 279.398

Accurate Mass: 276.841934

Percentage Composition: Cl 38.07%; Yb 61.93%

Physical Description: Hygroscopic white solid

Melting Point: Mp 865° (854°)

Solubility: Sol. H₂O

Aldrich: 43961-4

>>Derivative: Hexahydrate

CAS Registry Number: 10035-01-5

Molecular Formula: Cl₃H₁₂O₆Yb

Molecular Weight: 387.489

Accurate Mass: 384.905324

Percentage Composition: Cl 27.45%; H 3.12%; O 24.77%; Yb 44.66%

Physical Description: Deliquescent green cryst.

Melting Point: Mp 153-155°

Solubility: Sol. H₂O, EtOH

Other Data: Begins to lose H₂O at *ca.* 80°. Isostructural with Gd analogue

Aldrich: 20487-0

>>Derivative: Bis-THF complex

Synonym(s): Trichlorobis(tetrahydrofuran)ytterbium

Molecular Formula: C₈H₁₆Cl₃O₂Yb

Molecular Weight: 423.611

Accurate Mass: 420.956964

Percentage Composition: C 22.68%; H 3.81%; Cl 25.11%; O 7.55%; Yb 40.85%

Source/Synthesis: Obt. on prolonged treatment of Trichlorotris(tetrahydrofuran)ytterbium [MKQ87-Y](#) with pentane

Physical Description: Moisture-sensitive cryst.

Solubility: Sl. sol. pentane

>>Derivative: Tris-THF complex

Synonym(s): Trichlorotris(tetrahydrofuran)ytterbium

CAS Registry Number: 14782-79-7

Extra CAS Registry Numbers(s): 24644-29-9

Molecular Formula: C₁₂H₂₄Cl₃O₃Yb

Molecular Weight: 495.718

Accurate Mass: 493.014479

Percentage Composition: C 29.08%; H 4.88%; Cl 21.46%; O 9.68%; Yb 34.91%

Source/Synthesis: Synth. from Yb and excess C₂Cl₆ in THF in ultrasonic bath, or by dissolving YCl₃ in THF

Physical Description: Moisture-sensitive colourless cryst.

Other Data: Tends to lose THF to afford Trichlorobis(tetrahydrofuran)ytterbium [MKQ88-Z](#)

References: