



>>Entry Name: **Tris(2,2,6,6-tetramethyl-3,5-heptanedionato-*O,O'*)terbium**

Synonym(s): Tris(dipivaloylmethanido)terbium. Terbium(*III*) dipivaloylmethanide. Tb(thd)₃

CAS Registry Number: 15492-51-0

As Tris(2,2,6,6-tetramethyl-3,5-heptanedionato-*O,O'*)chromium(*III*), [HXL76-F](#) with
M = Tb

Molecular Formula: C₃₃H₅₇O₆Tb

Molecular Weight: 708.735

Accurate Mass: 708.340857

Percentage Composition: C 55.93%; H 8.11%; O 13.54%; Tb 22.42%

Use/Importance: Emits bright green fluorescence when irradiated at 366 nm

Physical Description: White cryst.

Melting Point: Mp 177-180° (150-152°)

Solubility: Sol. C₆H₆, CHCl₃, CCl₄, MeOH, EtOH, EtOAc, hexane

Other Data: Paramagnetic, $\mu_{\text{eff}} = 9.6\mu_{\text{B}}$

Aldrich: 43405-1

Other: Gelest AKT821

>>Derivative: Dimer

Molecular Formula: C₆₆H₁₁₄O₁₂Tb₂

Molecular Weight: 1417.47

Accurate Mass: 1416.681714

Percentage Composition: C 55.93%; H 8.11%; O 13.54%; Tb 22.42%

>>Derivative: Py complex

CAS Registry Number: 33134-19-9

Molecular Formula: C₃₈H₆₂NO₆Tb

Molecular Weight: 787.836

Accurate Mass: 787.383056

Percentage Composition: C 57.93%; H 7.93%; N 1.78%; O 12.18%; Tb 20.17%

Physical Description: White cryst.

Melting Point: Mp 135-137°

Solubility: Sol. Py, hexane

Other Data: Paramagnetic, $\mu_{\text{eff}} = 9.7\mu_{\text{B}}$

>>Derivative: Bipy complex

CAS Registry Number: 33134-20-2

Molecular Formula: C₄₃H₆₅N₂O₆Tb

Molecular Weight: 864.922

Accurate Mass: 864.409605

Percentage Composition: C 59.71%; H 7.57%; N 3.24%; O 11.10%; Tb 18.37%

Physical Description: White cryst.

Melting Point: Mp 195°

Solubility: Sol. CCl₄, hexane

Other Data: Paramagnetic, $\mu_{\text{eff}} = 9.7\mu_{\text{B}}$

>>Derivative: Phen complex

CAS Registry Number: 33135-11-4

Molecular Formula: C₄₅H₆₅N₂O₆Tb

Molecular Weight: 888.944

Accurate Mass: 888.409605

Percentage Composition: C 60.80%; H 7.37%; N 3.15%; O 10.80%; Tb 17.88%

Physical Description: Greenish-white cryst.

Melting Point: Mp 241-242°

Solubility: Sol. CCl₄, hexane

Other Data: Paramagnetic, $\mu_{\text{eff}} = 9.7\mu_{\text{B}}$