



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

Synonym(s): Tris(dipivaloylmethanido)europium. Europium(*III*) dipivaloylmethanide. Resolve-Al. Eu(thd)₃

CAS Registry Number: 15522-71-1

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

Molecular Formula: C₃₃H₅₇EuO₆

Molecular Weight: 701.775

Accurate Mass: 702.33674

Percentage Composition: C 56.48%; H 8.19%; Eu 21.65%; O 13.68%

Use/Importance: Commercially available nmr shift reagent. Resolves mixts. of steroidal diastereoisomers

Other Data: Generally forms 1:1 complexes with Lewis bases

Aldrich: 15697-3

Fluka: 46145

Sigma: T8886

Other: Gelest AKE295

>>Derivative: Dimer

CAS Registry Number: 35185-03-6

Molecular Formula: C₆₆H₁₁₄Eu₂O₁₂

Molecular Weight: 1403.549

Accurate Mass: 1404.67348

Percentage Composition: C 56.48%; H 8.19%; Eu 21.65%; O 13.68%

Physical Description: Yellow cryst.

Melting Point: Mp 187-189° (190-191°)

Boiling Point: Subl. 180° *in vacuo*

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

Other Data: Paramagnetic, $\mu_{\text{eff}} = 3.4\mu\text{B}$

>>Derivative: DMSO complex

Molecular Formula: C₃₅H₆₃EuO₇S

Molecular Weight: 779.909

Accurate Mass: 780.350675

Percentage Composition: C 53.90%; H 8.14%; Eu 19.48%; O 14.36%; S 4.11%

Physical Description: White needles

Solubility: Sol. DMSO

Other Data: Gradually loses DMSO on exp. to air

>>Derivative: Py complex

CAS Registry Number: 33134-13-3

Molecular Formula: C₃₈H₆₂EuNO₆

Molecular Weight: 780.876

Accurate Mass: 781.378939

Percentage Composition: C 58.45%; H 8.00%; Eu 19.46%; N 1.79%; O 12.29%

Physical Description: White cryst.

Melting Point: Mp 135-138°

Solubility: Sol. Py, C₆H₆

Other Data: $\mu_{\text{eff}} = 3.7\mu\text{B}$

>>Derivative: Bis-Py complex

CAS Registry Number: 24189-43-3

Molecular Formula: C₄₃H₆₇EuN₂O₆

Molecular Weight: 859.977

Accurate Mass: 860.421138

Percentage Composition: C 60.06%; H 7.85%; Eu 17.67%; N 3.26%; O 11.16%

Physical Description: Colourless cryst. (Py)

Solubility: Sol. Py

Other Data: Square antiprismatic struct. which is retained in soln.