



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

Synonym(s): Tris(dipivaloylmethanido)lanthanum. Lanthanum(*III*) dipivaloylmethanide. La(thd)₃. Resolve-Al La

CAS Registry Number: 14319-13-2

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

Molecular Formula: C₃₃H₅₇LaO₆

Molecular Weight: 688.715

Accurate Mass: 688.321862

Percentage Composition: C 57.55%; H 8.34%; La 20.17%; O 13.94%

Use/Importance: Commercially available nmr shift reagent

Aldrich: 23726-4

Sigma: T2642

Other: Gelest AKL435

>>Derivative: Dimer

Molecular Formula: C₆₆H₁₁₄La₂O₁₂

Molecular Weight: 1377.43

Accurate Mass: 1376.643724

Percentage Composition: C 57.55%; H 8.34%; La 20.17%; O 13.94%

Physical Description: Hygroscopic colourless cryst. (DMF)

Melting Point: Mp 238-248° (sealed tube) (148-149°)

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

>>Derivative: DMF complex (1:1)

CAS Registry Number: 17979-38-3

Molecular Formula: C₃₆H₆₄LaNO₇

Molecular Weight: 761.81

Accurate Mass: 761.374626

Percentage Composition: C 56.76%; H 8.47%; La 18.23%; N 1.84%; O 14.70%

Physical Description: Colourless cryst.

Melting Point: Mp 118-235°

Solubility: Sol. DMF

Other Data: Dec. >115° with loss of DMF

>>Derivative: 2,9-Dimethylphen complex

Molecular Formula: C₄₇H₆₉LaN₂O₆

Molecular Weight: 896.977

Accurate Mass: 896.42191

Percentage Composition: C 62.94%; H 7.75%; La 15.49%; N 3.12%; O 10.70%

Physical Description: Cryst. (hexane)

Melting Point: Mp 219-221°

Solubility: Sol. CCl₄, hexane

>>Derivative: Tetraglyme complex

Molecular Formula: C₄₃H₇₉LaO₁₁

Molecular Weight: 910.996

Accurate Mass: 910.468587

Percentage Composition: C 56.69%; H 8.74%; La 15.25%; O 19.32%

Source/Synthesis: Synth. from parent and tetraglyme in hexane

Physical Description: Pale yellow cryst.

Melting Point: Mp 41-44°

Solubility: Sol. C₆H₆, hexane

Other Data: Dec. at 175-195°/10⁻³ mmHg. Dec. on heating to parent. Has 9-coord. La with only three of glyme oxygens used to bind to La

References: