



**>>Entry Name: Tris(2,4-pentanedionato-*O,O'*)lanthanum(*III*)**

**Synonym(s):** Tris(acetylacetonato)lanthanum(*III*). Lanthanum(*III*) acetylacetonate. La(acac)<sub>3</sub>

**CAS Registry Number:** 14284-88-9

**Related CAS Registry Numbers(s):** 22392-66-1 56831-11-9

**Extra CAS Registry Numbers(s):** 64424-12-0

As Tris(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato-*O,O'*)lanthanum(*III*), [HRN32-J](#) with  
 $R^1 = R^2 = CH_3$

**Molecular Formula:** C<sub>15</sub>H<sub>21</sub>LaO<sub>6</sub>

**Molecular Weight:** 436.233

**Accurate Mass:** 436.040162

**Percentage Composition:** C 41.30%; H 4.85%; La 31.84%; O 22.01%

**Use/Importance:** Plastics additive. Commercially available

**Physical Description:** Moisture-sensitive amorphous solid

**Solubility:** Sol. acetylacetone

**Hazard & Toxicity:** Irritant

**Other:** Gelest AKL430

**>>Derivative: Dihydrate**

**CAS Registry Number:** 22203-88-9

**Molecular Formula:** C<sub>15</sub>H<sub>25</sub>LaO<sub>8</sub>

**Molecular Weight:** 472.263

**Percentage Composition:** C 38.15%; H 5.34%; La 29.41%; O 27.10%

**Physical Description:** Colourless cryst. (EtOH)

**Melting Point:** Mp 150-152°

**Solubility:** Sol. EtOAc

**Other Data:** 8-Coord. molecule

**>>Derivative: Trihydrate**

**Molecular Formula:** C<sub>15</sub>H<sub>27</sub>LaO<sub>9</sub>

**Molecular Weight:** 490.278

**Percentage Composition:** C 36.75%; H 5.55%; La 28.33%; O 29.37%

**Physical Description:** Colourless cryst. (EtOH/acetylacetone)

**Melting Point:** Mp 142-143°

**Other Data:** Presumed 8-coord.

**>>Derivative: Isopropanolamine adduct (1:1)**

**CAS Registry Number:** 42730-97-2

**Molecular Formula:** C<sub>18</sub>H<sub>30</sub>LaNO<sub>7</sub>

**Molecular Weight:** 511.343

**Percentage Composition:** C 42.28%; H 5.91%; La 27.16%; N 2.74%; O 21.90%

**Physical Description:** White cryst.

**Solubility:** Sol. EtOAc

**>>Derivative: 1,2-Ethylenediamine complex**

**CAS Registry Number:** 42756-41-2

**Molecular Formula:** C<sub>17</sub>H<sub>29</sub>LaN<sub>2</sub>O<sub>6</sub>

**Molecular Weight:** 496.331

**Accurate Mass:** 496.10891

**Percentage Composition:** C 41.14%; H 5.89%; La 27.99%; N 5.64%; O 19.34%

**Physical Description:** White cryst.

**Solubility:** Sol. EtOAc

**>>Derivative: 1,2-Propanediamine complex**

**CAS Registry Number:** 42756-43-4

**Molecular Formula:** C<sub>18</sub>H<sub>31</sub>LaN<sub>2</sub>O<sub>6</sub>

**Molecular Weight:** 510.358

**Accurate Mass:** 510.12456

**Percentage Composition:** C 42.36%; H 6.12%; La 27.22%; N 5.49%; O 18.81%

**Physical Description:** White cryst.

**Solubility:** Sol. EtOAc