>>**Entry Name: Tris(2,4-pentanedionato-*O,O'*)yttrium(*III*)**
Synonym(s): Tris(acetylacetonato)yttrium(*III*). Yttrium(*III*) acetylacetonate. $Y(acac)_3$

CAS Registry Number: 15554-47-9
Related CAS Registry Numbers(s): 56831-08-4

As Tris(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato-*O,O'*)yttrium(*III*), HRB17-A with
$R^1 = R^2 = CH_3$

Molecular Formula: $C_{15}H_{21}O_6Y$
Molecular Weight: 386.233
Accurate Mass: 386.039664
Percentage Composition: C 46.65%; H 5.48%; O 24.85%; Y 23.02%

Source/Synthesis: Synth. from $Y[N(SiMe_3)_2]_3$ and Hacac in toluene
Use/Importance: Used in synth. of metastable Zirconia
Physical Description: Moisture-sensitive colourless solid
Melting Point: Mp 102° (cryst. form)
Solubility: Sol. acetylacetone, toluene
Other Data: Anhyd. compd. obt. in 2 forms, cryst. and amorphous. Undergoes hydrol. in hexane to form $Y_4(OH)_2(acac)_{10}$

Other: Gelest AKY930

>>**Derivative:** Monohydrate

CAS Registry Number: 56831-10-8
Molecular Formula: $C_{15}H_{23}O_7Y$
Molecular Weight: 404.248
Percentage Composition: C 44.57%; H 5.73%; O 27.70%; Y 21.99%
Physical Description: Colourless cryst.
Melting Point: Mp 130°

>>**Derivative:** Trihydrate

CAS Registry Number: 17068-53-0
Molecular Formula: $C_{15}H_{27}O_9Y$
Molecular Weight: 440.279
Percentage Composition: C 40.92%; H 6.18%; O 32.71%; Y 20.19%
Physical Description: Colourless needles (aq. EtOH)
Melting Point: Mp 129-131°. Mp 131-132° (141-142°)
Other Data: 8-Coord. with 1 H_2O in lattice

>>**Derivative:** Phen complex
Synonym(s): Tris(2,4-pentanedionato-*O,O'*)(1,10-phenanthroline-N^1,N^{10})yttrium

CAS Registry Number: 18040-73-8
Molecular Formula: $C_{27}H_{29}N_2O_6Y$
Molecular Weight: 566.442
Accurate Mass: 566.108412
Percentage Composition: C 57.25%; H 5.16%; N 4.95%; O 16.95%; Y 15.70%
Physical Description: Colourless cryst.
Melting Point: Mp 230-232°
Solubility: Sol. EtOH

>>**Derivative:** Phen *N*-oxide complex

CAS Registry Number: 137202-47-2
Molecular Formula: $C_{27}H_{29}N_2O_7Y$
Molecular Weight: 582.441
Accurate Mass: 582.103327
Percentage Composition: C 55.68%; H 5.02%; N 4.81%; O 19.23%; Y 15.26%
Physical Description: Pale yellow cryst (MeCN)
Other Data: Has 8-coord. Y in distorted sq. antiprismatic struct.

References:

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