



>>Entry Name: Gadolinium(III) nitrate

Synonym(s): Trinitratogadolinium(III)

CAS Registry Number: 10168-81-7

Gd(NO₃)₃

Molecular Formula: GdN₃O₉

Molecular Weight: 343.265

Accurate Mass: 343.887556

Percentage Composition: Gd 45.81%; N 12.24%; O 41.95%

Physical Description: Hygroscopic white solid

Solubility: Sol. EtOH, H₂O

>>Derivative: Pentahydrate

CAS Registry Number: 52788-53-1

Fluka: 48219

>>Derivative: Hexahydrate

CAS Registry Number: 19598-90-4

Physical Description: Deliquescent colourless cryst.

Melting Point: Mp 91°

Solubility: V. sol. H₂O, sol. EtOH, Me₂CO

Other Data: Prob. contains 9-coord. Gd(NO₃)₃(H₂O)₃ molecules. Various other hydrates known

Hazard & Toxicity: LD₅₀ (rat, ipr) 230 mg/kg

Aldrich: 45113-4

>>Derivative: 18-Crown-6 complex

CAS Registry Number: 75845-32-8

Physical Description: White cryst.

Solubility: Sl. sol. Me₂CO

Other Data: Contains Gd(NO₃)₃(H₂O)₃ molecules. Similar compds. obt. for other lanthanides (Tb-Lu)

References:

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Walker, A. *et al.*, *J. Chem. Phys.*, 1965, **43**, 2689, (*ir*)

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