



>>Entry Name: Samarium nitrate

Synonym(s): Trinitratosamarium

CAS Registry Number: 10361-83-8

Related CAS Registry Numbers(s): 97445-73-3

$\text{Sm}(\text{NO}_3)_3$

Molecular Formula: $\text{N}_3\text{O}_9\text{Sm}$

Molecular Weight: 336.375

Accurate Mass: 337.883186

Percentage Composition: N 12.49%; O 42.81%; Sm 44.70%

Physical Description: Hygroscopic cream-coloured solid

Solubility: Sol. H_2O , EtOH

Other Data: Usually forms hexahydrate. Tetra- and pentahydrates also reported

>>Derivative: Hexahydrate

Synonym(s): Samarium nitrate hexahydrate

CAS Registry Number: 13759-83-6

Molecular Formula: $\text{H}_{12}\text{N}_3\text{O}_{15}\text{Sm}$

Molecular Weight: 444.466

Accurate Mass: 445.946576

Percentage Composition: H 2.72%; N 9.45%; O 54.00%; Sm 33.83%

Physical Description: Pale yellow cryst.

Melting Point: Mp 78-79°

Solubility: V. sol. H_2O , EtOH, Me_2CO

Other Data: Contains 10-coord. $\text{Sm}(\text{NO}_3)_3(\text{H}_2\text{O})_4$ molecules

Aldrich: 29812-3

Fluka: 84455

References:

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

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Ekspenbetov, A.A. *et al.*, *Koord. Khim.*, 1985, **11**, 680; *CA*, **103**, 62896, (*cryst struct*)

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