



>>Entry Name: Thulium(III) nitrate

Synonym(s): Trinitratothulium(III)

CAS Registry Number: 14985-19-4

Related CAS Registry Numbers(s): 39675-77-9

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

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

Molecular Weight: 354.949

Accurate Mass: 354.897669

Percentage Composition: N 11.84%; O 40.57%; Tm 47.59%

Physical Description: Hygroscopic green solid

Solubility: Sol. H_2O , EtOH

>>Derivative: Trihydrate

CAS Registry Number: 76567-58-3

Extra CAS Registry Numbers(s): 81201-56-1

Molecular Formula: $\text{H}_6\text{N}_3\text{O}_{12}\text{Tm}$

Molecular Weight: 408.995

Accurate Mass: 408.929364

Percentage Composition: H 1.48%; N 10.27%; O 46.94%; Tm 41.30%

Other Data: Comprises 9-coord. $\text{Tm}(\text{NO}_3)_3(\text{H}_2\text{O})_3$ molecules

>>Derivative: Tetrahydrate

CAS Registry Number: 37131-80-9

Molecular Formula: $\text{H}_8\text{N}_3\text{O}_{13}\text{Tm}$

Molecular Weight: 427.01

Accurate Mass: 426.939929

Percentage Composition: H 1.89%; N 9.84%; O 48.71%; Tm 39.56%

>>Derivative: Pentahydrate

CAS Registry Number: 36548-87-5

Molecular Formula: $\text{H}_{10}\text{N}_3\text{O}_{14}\text{Tm}$

Molecular Weight: 445.025

Accurate Mass: 444.950494

Percentage Composition: H 2.26%; N 9.44%; O 50.33%; Tm 37.96%

Use/Importance: Commercially available

Physical Description: Deliquescent green cryst.

Solubility: Sol. H_2O /EtOH/ Me_2CO

Other Data: Prob. has 9-coord. $\text{Tm}(\text{NO}_3)_3(\text{H}_2\text{O})_3$ molecules

Aldrich: 32599-6

References:

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Inorg. Synth., 1957, **5**, 37, (*synth*)

Wendlandt, W.W. *et al.*, *J. Inorg. Nucl. Chem.*, 1960, **12**, 276, (*synth, dta*)

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

Ivanov-Emin, B.N. *et al.*, *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1972, **17**, 1517, (*synth, ir*)

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **2**, 1109, (*synth*)