



>>Entry Name: Erbium(III) nitrate

Synonym(s): Trinitratoerbium(III)

CAS Registry Number: 10168-80-6

Related CAS Registry Numbers(s): 40309-95-3

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

Molecular Formula:  $\text{ErN}_3\text{O}_9$

Molecular Weight: 353.275

Accurate Mass: 351.893747

Percentage Composition: Er 47.35%; N 11.89%; O 40.76%

Physical Description: Hygroscopic pink solid

Solubility: Sol.  $\text{H}_2\text{O}$ , EtOH

>>Derivative: Trihydrate

CAS Registry Number: 76567-59-4

>>Derivative: Pentahydrate

CAS Registry Number: 10031-51-3

Physical Description: Red cryst.

Melting Point: Mp 100°

Solubility: Sol.  $\text{H}_2\text{O}$ , EtOH,  $\text{Me}_2\text{CO}$ ,  $\text{Et}_2\text{O}$

Other Data: Loses 4 $\text{H}_2\text{O}$  at =130°. Probably contains 9-coordinate  $\text{Er}(\text{NO}_3)_3(\text{H}_2\text{O})_3$  molecules. Most common hydrate

Aldrich: 29816-6

#### References:

Cleve, P.T., *C. R. Hebd. Seances Acad. Sci.*, 1880, **91**, 381, (*synth*)

Marsh, J.K., *J.C.S.*, 1941, 561, (*synth*)

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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*)

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