



>>Entry Name: Terbium sulfate (Tb<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>)

CAS Registry Number: 13692-99-4

Tb<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>

Molecular Formula: O<sub>12</sub>S<sub>3</sub>Tb<sub>2</sub>

Molecular Weight: 606.041

Accurate Mass: 605.705874

Percentage Composition: O 31.68%; S 15.87%; Tb 52.45%

Source/Synthesis: Anhyd. salts prepd. by dehydration of hydrate

Other Data:  $\mu_{\text{eff}} = 9.66\mu_{\text{B}}$

>>Derivative: Octahydrate

CAS Registry Number: 13842-67-6

Molecular Formula: H<sub>16</sub>O<sub>20</sub>S<sub>3</sub>Tb<sub>2</sub>

Molecular Weight: 750.163

Accurate Mass: 749.790394

Percentage Composition: H 2.15%; O 42.66%; S 12.82%; Tb 42.37%

Source/Synthesis: Commercially available

Physical Description: White cryst.

Solubility: Sl. sol. H<sub>2</sub>O

Other Data: 8-Coord. Loses 8H<sub>2</sub>O at 360°.  $\mu_{\text{eff}} = 9.75\mu_{\text{B}}$

Aldrich: 32595-3

References:

*Aldrich Library of FT-IR Spectra*, 1st edn., 1985, **2**, 1244B, (*ir*)

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Ivanov, V.I., *Acta Cryst. A, Suppl*, 1966, **21**, 55

Postmus, C. *et al.*, *J. Chem. Phys.*, 1968, **48**, 3605, (*ir*)

Chachra, S.P. *et al.*, *Indian J. Pure Appl. Phys.*, 1976, **14**, 14, (*magnetism*)

Pokrovskii, A.N. *et al.*, *Zh. Neorg. Khim.*, 1976, **21**, 567; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1976, **21**, 305, (*tga, dta*)

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Saito, A., *Thermochim. Acta*, 1988, **124**, 127, (*synth, dta*)