



>>Entry Name: Lanthanum(III) sulfate

CAS Registry Number: 10099-60-2

Related CAS Registry Numbers(s): 57804-25-8

$\text{La}_2(\text{SO}_4)_3$

Molecular Formula: $\text{La}_2\text{O}_{12}\text{S}_3$

Molecular Weight: 566.002

Accurate Mass: 565.667884

Percentage Composition: La 49.08%; O 33.92%; S 17.00%

Physical Description: Hygroscopic white powder

Melting Point: Mp 1150°

Solubility: Sl. sol. H_2O

Hazard & Toxicity: Intraperitoneal poison. Emits SO_3 on heating

Aldrich: 20356-4

>>Derivative: Tetrahydrate

CAS Registry Number: 20814-01-1

Physical Description: Colourless cryst.

Other Data: Contains 9 and 10-coord. lanthanum

>>Derivative: Octahydrate

CAS Registry Number: 26299-17-2

Physical Description: Colourless cryst.

Other Data: Has 9-coord., tricapped trigonal prismatic La

>>Derivative: Nonahydrate

CAS Registry Number: 10294-62-9

Molecular Formula: $\text{H}_{18}\text{La}_2\text{O}_{21}\text{S}_3$

Molecular Weight: 728.139

Percentage Composition: H 2.49%; La 38.15%; O 46.14%; S 13.21%

Physical Description: Colourless hexagonal cryst.

Solubility: Sl. sol. H_2O

Other Data: Contains 9-coord. La at 1 site, 12-coord. La at the other

References:

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Pannetier, G. *et al.*, *Bull. Soc. Chim. Fr.*, 1963, 1059, (*synth, struct*)

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

Petrov, K.I. *et al.*, *Zh. Neorg. Khim.*, 1970, **15**, 615, (*struct, ir*)

Abenozza, M. *et al.*, *J. Raman Spectrosc.*, 1972, **6**, 26, (*Raman*)

Aslanov, L.A. *et al.*, *Zh. Fiz. Khim.*, 1973, **47**, 2172, (*synth, struct*)

Gebert Sherry, E., *J. Solid State Chem.*, 1976, **19**, 271, (*struct*)

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Shi, B. *et al.*, *Jiegou Huaxue*, 1987, **6**, 70; *CA*, **107**, 146145, (*tetrahydrate, cryst struct*)

Vanderpool, R.A. *et al.*, *J. Mol. Struct.*, 1991, **245**, 255, (*octahydrate, cryst struct, ir, Raman, dsc*)

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