



>>Entry Name: Scandium sulfate ($\text{Sc}_2(\text{SO}_4)_3$)

CAS Registry Number: 13465-61-7

Related CAS Registry Numbers(s): 52788-54-2

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

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

Molecular Weight: 378.103

Accurate Mass: 377.767018

Percentage Composition: O 50.78%; S 25.44%; Sc 23.78%

Physical Description: Hygroscopic colourless cryst.

Solubility: Sl. sol. H_2O

Other Data: Forms several hydrates. Dec. forming Sc_2O_3 above 600°

Fluka: 84640

>>Derivative: Hexahydrate

Molecular Formula: $\text{H}_{12}\text{O}_{18}\text{S}_3\text{Sc}_2$

Molecular Weight: 486.194

Percentage Composition: H 2.49%; O 59.23%; S 19.79%; Sc 18.49%

Physical Description: Colourless cryst.

Solubility: V. sol. H_2O

Other Data: Loses $4\text{H}_2\text{O}$ at 100° and remaining $2\text{H}_2\text{O}$ at 250°

>>Derivative: Pentahydrate

CAS Registry Number: 15292-44-1

Molecular Formula: $\text{H}_{10}\text{O}_{17}\text{S}_3\text{Sc}_2$

Molecular Weight: 468.179

Percentage Composition: H 2.15%; O 58.10%; S 20.55%; Sc 19.20%

Physical Description: Colourless cryst.

Solubility: V. sol. H_2O

Other Data: Dec. $>110^\circ$. Octahedral. coord. at Sc. Loses $3\text{H}_2\text{O}$ at 110° ; anhyd. salt formed at $236\text{--}284^\circ$

Aldrich: 32591-0

References:

Komissarova, L.N. *et al.*, *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1965, **10**, 407; 1979, **16**, 1231; 1258, (*synth*)

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

Perret, R. *et al.*, *C. R. Hebd. Seances Acad. Sci. Ser. C*, 1975, **280**, 1415, (*cryst struct*)

Niinisto, L. *et al.*, *Finn. Chem. Lett.*, 1975, 45, (*struct*)

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