



>>Entry Name: Rhodium(III) sulfate (Rh₂(SO₄)₃)

Synonym(s): Dirhodium trisulfate

CAS Registry Number: 10489-46-0

Rh₂(SO₄)₃

Molecular Formula: O₁₂Rh₂S₃

Molecular Weight: 494.002

Accurate Mass: 493.66619

Percentage Composition: O 38.86%; Rh 41.66%; S 19.47%

Aldrich: 39834-9

>>Derivative: Tetrahydrate

CAS Registry Number: 15274-78-9

Physical Description: Red amorphous solid

Solubility: Spar. sol. H₂O

Other Data: Probably contains coordinated SO₄²⁽⁻⁾

>>Derivative: Decahydrate

CAS Registry Number: 15274-75-6

Physical Description: V. hygroscopic yellow flocculent solid

Solubility: V. sol. H₂O

Other Data: Probably contains [Rh(H₂O)₆]³⁽⁺⁾ and anionic SO₄²⁽⁻⁾. Tetradecahydrate also known

>>Derivative: Dodecahydrate

Molecular Formula: H₂₄O₂₄Rh₂S₃

Molecular Weight: 710.184

Accurate Mass: 709.79297

Percentage Composition: H 3.41%; O 54.07%; Rh 28.98%; S 13.55%

Physical Description: Pale yellow cryst.

Solubility: V. sol. cold H₂O; dec. hot H₂O; insol. EtOH

References:

Sidgwick, N.V., *The Chemical Elements and their Compds.*, Oxford, 1950, **2**, 1519

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Estafeva, O.N. *et al.*, *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1966, **11**, 1389, (*ir*)

Brauer, G., *Handbuch Prep. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **3**, 1740, (*synth*)

Baranovskii, I.B. *et al.*, *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1979, **24**, 1893, (*pe*)