



>>Entry Name: Rhodium(III) nitrate (Rh(NO₃)₃)

CAS Registry Number: 10139-58-9

Rh(NO₃)₃

Molecular Formula: N₃O₉Rh

Molecular Weight: 288.92

Accurate Mass: 288.868957

Percentage Composition: N 14.54%; O 49.84%; Rh 35.62%

Source/Synthesis: Various synth. e.g. RhI₃ + boiling HNO₃, or RhBr₃ + N₂O₅; or Rh(OH)₃ + HNO₃

Use/Importance: Useful as catalyst in (poly)olefin chem.

Physical Description: Brown solid; v. hygroscopic, liquefies in moist air

Aldrich: 30920-6

Fluka: 83750

>>Derivative: Dihydrate

Molecular Formula: H₄N₃O₁₁Rh

Molecular Weight: 324.951

Accurate Mass: 324.890087

Percentage Composition: H 1.24%; N 12.93%; O 54.16%; Rh 31.67%

Physical Description: Black solid

Solubility: Sol. aqua. regia, aq. Br; insol H₂O; dec. hot H₂O

Other Data: Dec. on heating

References:

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Harrison, B. *et al.*, *Proc. Int. Conf. Coord. Chem.*, 13th, 1970, 1970, **1**, 307, (*synth*)

Schubochkin, L.K. *et al.*, *Zh. Neorg. Khim.*, 1973, **18**, 3260; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1973, **18**, 1735, (*synth, props*)

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **3**, 1741, (*synth, dihydrate*)

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