



>>Entry Name: Palladium(II) sulfate (PdSO₄)

CAS Registry Number: 13566-03-5

PdSO₄

Molecular Formula: O₄PdS

Molecular Weight: 202.484

Accurate Mass: 201.855208

Percentage Composition: O 31.61%; Pd 52.56%; S 15.84%
2-

Source/Synthesis: Synth. from many Pd compds. + H₂S₂O₄ at 250-325°

Physical Description: Deliquescent dark brown cryst.

Other Data: Ir ν_{SO} 1160, 1105, 1035, 996 cm⁻¹

>>Derivative: Dihydrate

CAS Registry Number: 128480-25-1

Extra CAS Registry Numbers(s): 13444-98-9

Molecular Formula: H₄O₆PdS

Molecular Weight: 238.514

Percentage Composition: H 1.69%; O 40.25%; Pd 44.62%; S 13.44%

Source/Synthesis: Obt. from Pd sponge reaction with a mixt. of H₂SO₄/HNO₃/H₂O (1:2:2 by vol.)

Physical Description: Greenish-brown cryst.

Solubility: Spar. sol. H₂O

Other Data: Sq. planar stacked struct. (Pd-Pd 308 pm) with bidentate SO₄²⁻. Dec. on heating. Ir ν_{SO} 1235, 1089, 995, 960 cm⁻¹

Hazard & Toxicity: Prob. highly toxic

References:

Eskenazi, R. *et al.*, *J. Inorg. Nucl. Chem.*, 1966, **28**, 521, (*synth, ir*)

Timonova, R. *et al.*, *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1977, **22**, 1246, (*synth, ir*)

Korsunskii, V.I. *et al.*, *Zh. Neorg. Khim.*, 1990, **35**, 583-588; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1990, **35**, 330-333, (*dihydrate*)