



>>Entry Name: Manganese(III) phosphate (MnPO₄)

CAS Registry Number: 14986-93-7

Related CAS Registry Numbers(s): 104663-56-1

Extra CAS Registry Numbers(s): 10124-54-6

MnPO₄

Molecular Formula: MnO₄P

Molecular Weight: 149.909

Accurate Mass: 149.891469

Percentage Composition: Mn 36.65%; O 42.69%; P 20.66%

>>Variant: Quartz-form

Molecular Formula: MnO₄P

Molecular Weight: 149.909

Accurate Mass: 149.891469

Percentage Composition: Mn 36.65%; O 42.69%; P 20.66%

Source/Synthesis: Obt. hydrothermally at *ca.* 600° from Mn₂O₃ soln. evaporated in 85% H₃PO₄

>>Variant: Cristobalite-form

Molecular Formula: MnO₄P

Molecular Weight: 149.909

Accurate Mass: 149.891469

Percentage Composition: Mn 36.65%; O 42.69%; P 20.66%

Source/Synthesis: Obt. hydrothermally at 550° and 680 atm. from Mn₂O₃ soln. evaporated in 85% H₃PO₄

>>Derivative: Monohydrate

CAS Registry Number: 13446-43-0

Source/Synthesis: Synth. by heating MnPO₄·1.5H₂O at 116-280°

Physical Description: Grey-green

Solubility: Insol. H₂O, strong acid; sol. H₄P₂O₇

Other Data: Can be quantitatively ignited to Mn₂P₂O₇

>>Derivative: Sesquihydrate

CAS Registry Number: 59867-01-5

Source/Synthesis: Synth. by treating MnCl₂·4H₂O with H₃PO₄ syrup and conc HNO₃, evaporating to near dryness and washing with H₂O

References:

Inorg. Synth., 1946, **2**, 213, (*synth*)

Schafer, E.C., *Z. Kristallogr.*, 1956, **108**, 263, (*synth, cryst struct, props*)

Goloshchapov, M.V., *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1976, **21**, 742, (*ir*)

Gmelin Handbook Inorg. Chem., Syst. No. 56, 1983, **C9**, 148, (*rev, bibl*)