>>**Entry Name: Nickel(*II*) phosphate ($Ni_3(PO_4)_2$)**
Synonym(s): Nickel(2+) phosphate (3:2), 9CI, 8CI. Nickel orthophosphate

CAS Registry Number: 10381-36-9
Related CAS Registry Numbers(s): 27176-17-6 31512-57-9 31512-58-0
$Ni_3(PO_4)_2$

Molecular Formula: $Ni_3O_8P_2$
Molecular Weight: 366.013
Accurate Mass: 363.712882
Percentage Composition: Ni 48.10%; O 34.97%; P 16.92%

Source/Synthesis: Synth. from P_4O_{10} + NiO_2 at 1350° in Pt vessel
Solubility: Spar. sol. H_2O
Other Data: With H_2 at 450° gives Ni_2P

>>**Derivative:** Octahydrate

CAS Registry Number: 19033-89-7
Molecular Formula: $H_{16}Ni_3O_{16}P_2$
Molecular Weight: 510.134
Accurate Mass: 507.797402
Percentage Composition: H 3.16%; Ni 34.51%; O 50.18%; P 12.14%
Source/Synthesis: Synth. by addition of aq. $NiCl_2$ to Py/ H_3PO_4 in H_2O
Physical Description: Green diamond-shaped rhombs (Py aq.)
Other Data: Glows on ignition. The water molecules coordinated to the cation are non-equiv. Further hydrates with 1, 2 and 7 H_2O have been claimed. Dec. on heating

References:

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