



>>Entry Name: Tetrasodium imidodiphosphate, 8CI

CAS Registry Number: 26039-10-1

$\text{Na}_4[(\text{O})_3\text{PNHP}(\text{O})_3]$

Molecular Formula: $\text{HNNa}_4\text{O}_6\text{P}_2$

Molecular Weight: 264.917

Accurate Mass: 264.886981

Percentage Composition: H 0.38%; N 5.29%; Na 34.71%; O 36.24%; P 23.38%

Source/Synthesis: Synth. from $\text{Na}_2(\text{PO}_3\text{NH}_2)$ at 210° *in vacuo*

Sigma: I0631

>>Derivative: Decahydrate

CAS Registry Number: 23389-30-2

Source/Synthesis: Synth. from unsymm. di-Ph ester and NaOH aq.

Physical Description: Fine white cryst. (aq. Me_2CO)

Solubility: Sol. H_2 (34.8 g per 100 cm^3 at 25°)

Other Data: Exists as NH tautomer. P-N 168 pm, PNP 129° (127°), OPO 113°

References:

Klement, R. *et al.*, *Z. Anorg. Allg. Chem.*, 1956, **283**, 246, (*synth*)

Kirsanov, A.V. *et al.*, *Zh. Obshch. Khim.*, 1958, **28**, 2487, (*synth*)

Inorg. Synth., 1960, **6**, 101, (*synth*)

Nielsen, M.L. *et al.*, *J.A.C.S.*, 1961, **83**, 99, (*synth*, *P-31 nmr*)

Larsen, M.L. *et al.*, *Science (Washington, D.C.)*, 1966, **166**, 1510, (*cryst struct*)

Gmelin Handbook Inorg. Chem., Syst. No. 21, 1967, **4**, 1668, (*rev, bibl*)

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **1**, 565, (*synth*)

Sukova, L.M. *et al.*, *Zh. Neorg. Khim.*, 1982, **27**, 1682; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1982, **27**, 950, (*ir, struct*)

Sukova, L.M. *et al.*, *Zh. Neorg. Khim.*, 1986, **31**, 1154; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1986, **31**, 655, (*synth, ir, Raman*)