



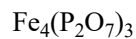
>>Entry Name: Iron(III) diphosphate (Fe<sub>4</sub>(P<sub>2</sub>O<sub>7</sub>)<sub>3</sub>)

ENTRY UNDER REVIEW

**Synonym(s):** Iron(III) pyrophosphate. Ferric diphosphate. Ferric pyrophosphate

**CAS Registry Number:** 10058-44-3

**Related CAS Registry Numbers(s):** 10402-25-2



**Molecular Formula:** Fe<sub>4</sub>O<sub>21</sub>P<sub>6</sub>

**Molecular Weight:** 745.218

**Accurate Mass:** 745.475543

**Percentage Composition:** Fe 29.98%; O 45.09%; P 24.94%

**Use/Importance:** Contained in metalworking lubricants. Catalyst e.g. for olefin oxidn. Dietary supplement used in bread fortification and infant formulas

**Biological Use/Importance:** Antianaemic agent

**Fluka:** 44935

**Sigma:** P6526

>>Derivative: Hydrate

**Use/Importance:** Catalyst; source of iron in nutrition; pigments; flame retardant

**Physical Description:** Yellow-white powder

**Solubility:** Insol. H<sub>2</sub>O; sol. dil. acid

**Other Data:** Freq. confused with the sodium citrate form below

>>Derivative: Sodium citrate complex

**Synonym(s):** Ferric pyrophosphate - sodium citrate

**Use/Importance:** Food additive, soluble form of iron (II) diphosphate

**Physical Description:** Green cryst; light sensitive

**Solubility:** Sol. H<sub>2</sub>O; insol. EtOH

**Other Data:** Formulated as Fe<sub>4</sub>(P<sub>2</sub>O<sub>7</sub>)<sub>3</sub>.nH<sub>2</sub>O combined with sodium citrate

References:

*Gmelin Handbook Inorg. Chem., Syst. No. 59, 1929, 777, (bibl)*

Takashima, Y. *et al.*, *Bull. Chem. Soc. Jpn.*, 1965, **38**, 1684, (*Mössbauer*)

Rabinowitz, I.N. *et al.*, *J.A.C.S.*, 1966, **88**, 4346, (*Mössbauer*)

Leitsin, V.A. *et al.*, *Zh. Neorg. Khim.*, 1966, **11**, 278, (*soln spp*)

*Encyclopedia of Food and Color Additives*, (ed. Burdock, G.A.), CRC Press, 1997, 1102-1103, (*use, props*)

*Martindale, The Extra Pharmacopoeia*, 32nd edn., *Pharmaceutical Press*, 1999, No. 1339

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., *Van Nostrand Reinhold*, 1992, FAZ525