FERRUM PHOSPHORICUM

(Phosphate of iron)

$Fe_3(PO_4)_2.\ 8H_2O$

Synonyms: Ferroso-ferric phosphate.

In the early stages of febrile conditions, it stands midway between sthenic activity of *Aconite* and *Bell.* and the asthenic sluggishness and torpidity of *Gels.* The typical *Ferr. phos.* subject is not full blooded and robust, but nervous, sensitive, anaemic with the false plethora and easy flushing of *Ferrum.* Prostration marked; face more active than *Gels.* The superficial redness never assumes the dusky hue of *Gels.* Pulse soft and flowing; no anxious restlessness of *Acon.* Susceptibility to chest troubles. Bronchitis of young children. In acute exacerbation of tuberculosis, a fine palliative of wonderful power. Corresponds to Grauvogl's oxygenoid constitution; the inflammatory, febrile, emaciating, wasting consumptive.

The remedy for first stage of all febrile disturbances and inflammations before exudation sets in; especially for catarrhal affections of the respiratory tract. *Ferr. phos.* 3x increases haemoglobin. In pale, anaemic subjects, with violent local congestions. Haemorrhages, bright, from any orifice.

Description: It consists of a mixture of hydrated *ferrous phosphate, ferric phosphate* and some hydrated oxides of *iron.* A greenish-blue amorphous powder; odourless and tasteless. Insoluble in *water* and *alcohol;* readily soluble in *hydrochloric acid.* Its colour darkens on exposure to air. It is commonly prepared by the interaction of *ferrous sulphate, sodium phosphate* and *sodium bicarbonate* in aqueous solution. Contains not less than 47 per cent of *ferrous* salts, calculated as $Fe_3(PO_4)_2.\ 8H_2O$.

Identification: Yields reactions characteristic of *phosphate* and of *iron.*

Arsenic: Not more than 5 parts per million.

Sulphate: 0.5 g dissolved in 2 ml of *hydrochloric acid,* complies with the *limit test for sulphates.*

Assay: Dissolve about 1 g, accurately weighed, in 20 ml of a 25 per cent w/v solution of *sulphuric acid* in *water* in a stoppered flask. Add 6 ml of *iodine monochloride solution* and 60 ml of *hydrochloric acid;* titrate with 0.05 M *potassium iodate* until the solution becomes light brown in colour; add 5 ml of *chloroform* and continue the titration until the *chloroform* becomes colourless. Each ml of 0.05 M *potassium iodate* is equivalent to 0.03344 g of $Fe_3(PO_4)_2.8H_2O$.

History and authority: Schussler introduced it and Moffat proved this drug. Allen's: *Encyclop. of Pure Mat. Med.,* Vol. X, 525.