

# Feroneph<sup>®</sup>-LP

Liposomal Ferric Pyrophosphate with Elemental Iron 30 mg,  
Vitamin C 50 mg, Folic Acid 200 mcg, Vitamin B12 0.75 mcg tablet

**Superior Absorption, Superior Safety**

## **Product Description:**

Each tablet contains

- Liposomal Ferric Pyrophosphate with elemental Iron 30 mg,
- Vitamin C: 50 mg
- Folic Acid: 200 mcg
- Vitamin B12 (Cyanocobalamin): 0.75 mcg

## **General Information:**

Liposomes are spherical vesicles characterized by a bilayer of lipids with an internal aqueous cavity. Liposome structural components are phospholipids or synthetic amphiphiles incorporated with sterols. This phospholipid bilayer is suitable for fundamental cellular functions, such as motility and shape change, and provides also the ability to mimic the biophysical properties of living cells .

## **Mode of Action:**

Feroneph-LP contains Iron salts like ferric pyrophosphate are covered with liposome, a spherical structure of a phospholipidic nature that is similar to those human cell membranes. This preparation crosses the gastric acid barrier and reaches the small intestine intact. In the intestine, the M cells due to their low lysozyme content integrally absorb liposomal iron without the need for specific transporters

The liposomal protection allows the iron to overcome the free gastric environment, preventing early degradation of the substance and/or its inactivation and to be absorbed directly which offers greater availability of Iron and reduces gastrointestinal side effects, and prevents iron instability in the gastrointestinal tract to be directly absorbed into the intestine and directly liberated into the liver

## **Ferric Pyrophosphate:**

Ferric pyrophosphate is an iron replacement product. Free iron presents several side effects as it can catalyze free radical formation and lipid peroxidation as well as the presence of interactions of iron in plasma. The ferric ion is strongly complexed by pyrophosphate. It presents an increasing interest as this insoluble form can be milder in the gastrointestinal tract and present higher bioavailability.

## **Vitamin C:**

- Vitamin C/Ascorbic acid reduces ferric iron to ferrous iron, which remains soluble even at neutral pH. Ferrous form is absorbed thrice as much as ferric form of iron
- Ascorbic acid is an essential nutrient in human diets, and necessary to maintain connective tissue and bone. Its biologically active form, vitamin C, functions as a reducing agent and coenzyme in several metabolic pathways. Ascorbic acid is considered an antioxidant.

### **Folic acid**

- Folic acid is important in DNA synthesis/cell division and helps to convert vitamin B12 into its coenzyme form. It is also essential for the interconversion of amino acids(i.e., homocysteine to methionine). It is mainly contained in green vegetables, fruits, and meat.
- In dialysis patients, it is cleared significantly during hemofiltration–hemodiafiltration and high-flux as well as low flux haemodialysis but also with peritoneal dialysis. It has been estimated that the serum levels fall by 37% post-dialysis and an oral supplement containing 6mg of folic acid can reconstitute the serum levels.
- Folic acid therapy reduces the risk of cardiovascular disease by 15%, especially among those with treatment duration over 24 months and a reduction in serum homocysteine levels over 20%.

### **Vitamin B-12(Cyanocobalamin)**

- Cyanocobalamin is a form of vitamin B12. Vitamin B12 is important for growth, cell reproduction, blood formation, and protein and tissue synthesis. This vitamin is necessary for DNA and RNA syntheses. There are studies showing impressive homocysteine reductions (from 11 to 30%) that may even include normalization of its serum levels in haemodialysis and peritoneal dialysis patients

### **Liposomal Drug Delivery-Benefits:**

Due to the Liposomal drug delivery technology, Feroneph-LP offers less chances of nausea, vomiting, constipation and there is no epigastric pain, sensation of heaviness and discolouration of mucus & feces.

### **Indications:**

- Chronic Kidney Disease-related Anemia
- Iron Deficiency Anemia and Inflammatory Bowel Disease
- Chemotherapy-related Anemia
- Celiac Disease
- Other Iron Deficiency Anemia Patients e.g. Diabetic Patients, Cirrhotic Patients, hepatitis-C patients

### **Dosage and administration:**

The suggested dose is 30 mg/day (1 tablet/Day) for 8 to 12 weeks, depending on the conditions.