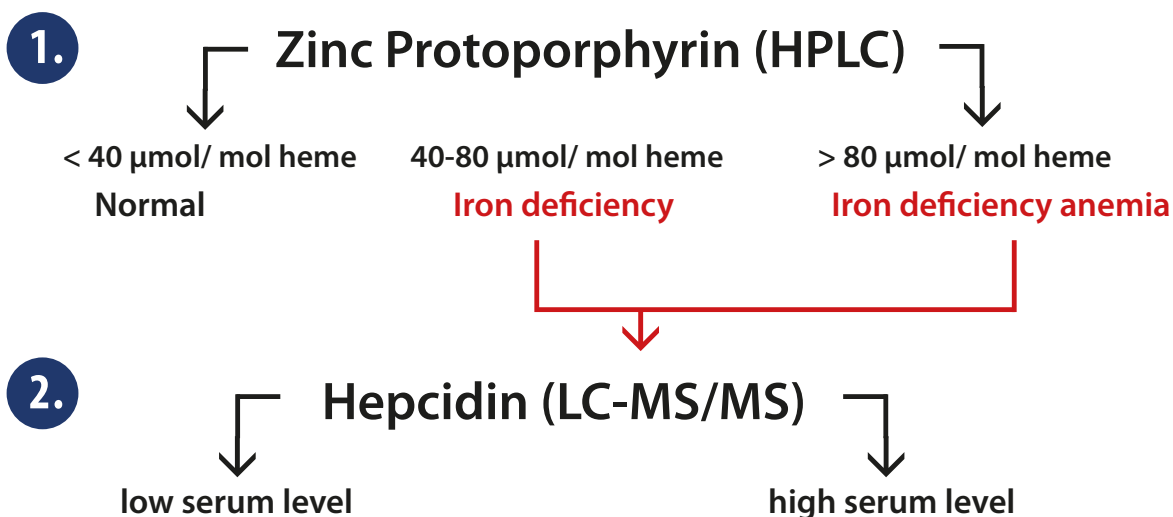
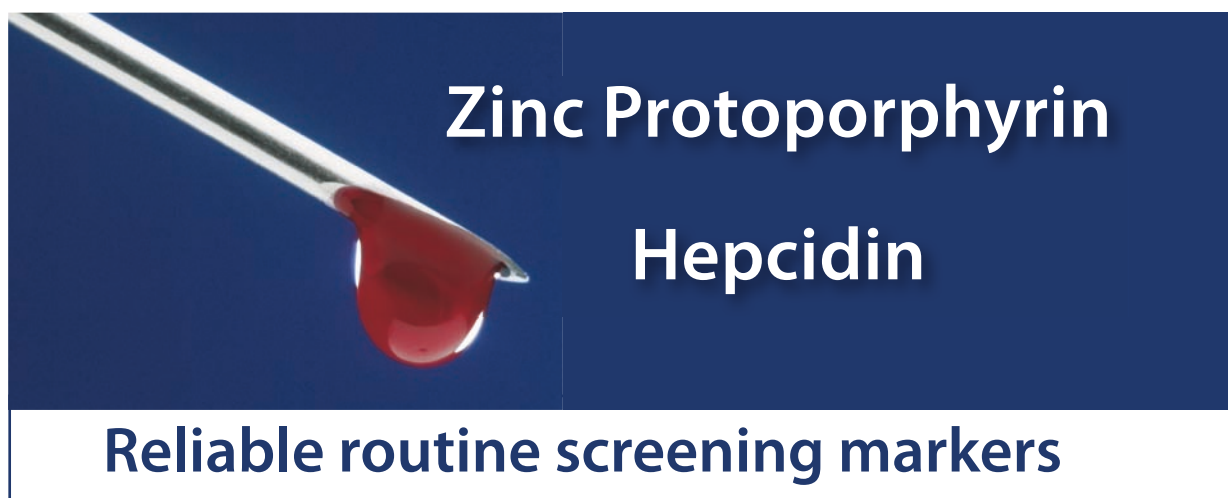


Diagnosics of iron deficiency



Iron deficiency anemia

- ▶ **Increased demand**
 - Pregnancy
 - Puberty
- ▶ **Blood loss**
 - Hypermenorrhagia
 - Birth
 - Surgery, blood donations
 - IBD
 - Angiodysplasia
 - Peptic ulcer, NSAR
 - GERD, hiatal hernia (Cameron erosions)
- ▶ **Iron malabsorption**
 - Chronic gastritis (A+B)
 - Coeliac disease
 - Gastric bypass surgery
 - Duodenal resection (Whipple's)
 - Nutritional deficiency

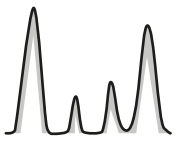
Iron loading anemia
Hereditary haemochromatosis

Anemia of chronic disease

- ▶ Inflammatory bowel disease (UC, CD)
- ▶ Chronic kidney disease
- ▶ Neoplastic disease
- ▶ Rheumatoid Arthritis
- ▶ Chronic infections



Distribuito in ITALIA da
Li StarFish S.r.l.
Via Cavour, 35
20063 Cernusco S/N (MI)
telefono 02-92150794
fax 02-92157285
info@listarfish.it
www.listarfish.it



Comprehensive routine diagnostics of iron disorders

Common routine parameters not sufficient for comprehensive evaluation

Disorders of the iron metabolism, especially iron deficiencies are a wide-spread problem in the population associated with a number of diseases. The determination of hemoglobin levels is not adequate to discover pre-anemic stages. In addition, other iron metabolism routine markers such as the acute phase proteins transferrin or ferritin are influenced by infections and inflammation and are hence not suitable for monitoring chronic disease patients.


Zinc Protoporphyrin - inflammation independent marker of the iron status

Zinc protoporphyrin (ZnPP) is synthesized during periods of iron insufficiency when zinc becomes the metal substitute for iron. Logically, ZnPP levels in the circulation increase in times of iron depletion. The ZnPP/heme ratio is a sensitive and specific indicator of the iron status in the bone marrow, independent of infections and inflammation. Values of $< 40 \mu\text{mol/mol}$ heme are normal, concentrations of $40\text{-}80 \mu\text{mol/mol}$ heme indicate a latent iron deficiency (Hb normal), concentrations of $> 80 \mu\text{mol/mol}$ heme exhibit a manifest iron deficiency anemia.

Hepcidin can differentiate between IDA and ACD

Hepcidin plays a central role in iron metabolism as a negative regulator of intestinal iron uptake and tissue distribution. In absolute iron deficiencies, it is down-regulated to promote iron uptake. During inflammation however, hepcidin synthesis is stimulated amongst others by interleukin-6, leading to a drop in available iron. The protein therefore represents an useful marker for the differentiation of iron deficiency anemia (IDA) and anemia of chronic disease (ACD).

We offer reliable tools for your routine diagnostics of iron disorders:



Zinc Protoporphyrin HPLC (KC2700)

- ▶ Inflammation independent routine screening tool for iron deficiency
- ▶ Sensitive and specific evaluation of iron nutrition and metabolism
- ▶ Easy determination in whole blood, only 10 min. running time

Hepcidin LC-MS/MS (KM4000)

- ▶ Monitoring of iron homeostasis
- ▶ Unique, reliable determination in serum
- ▶ Early predictive marker of functional iron deficiency
- ▶ Differentiation between Anemia of Chronic Disease (ACD) and Iron Deficiency Anemia (IDA)

