



## Spirulina Fe+

*Arthrospira platensis*

### Iron fortified

## Why Spirulina Fe+

- Ability to combine high protein content - (>50% d.w) with bioavailable and bioaccessible iron
- Ability to fortify Spirulina to desired iron levels (up to 3000 mg/kg)
- Proprietary algal strain fully characterized
- No GMO
- Made in Italy

## Spirulina fortification

- The possibility of changing the biochemical composition of Spirulina is an opportunity to obtain products with improved nutritional properties (e.g. oligo and microelements)
- Iron fortified Spirulina provides an organic iron source, overcoming the side-effects typical of oral iron salts administration
- Potential source of dietary iron to address IDA (Iron Deficiency Anemia)

## Iron deficiency

- Micronutrient malnutrition is a risk to global health. Although they are insignificant sources of energy, Micronutrients play a key role in the normal functioning of the human body system.
- The main causes of iron deficiency anemia are increased demand, reduction, absorption and/or increase of iron loss.
- According to WHO data, 1.62 billion people worldwide suffer from anemia.
- Iron deficiency is responsible for about 50% of cases of anemia.
- Iron deficiency is usually treated with iron salts orally, but up to 50% of patients complain about gastrointestinal side effects resulting in reduced compliance treatments.




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## Bioaccumulation of iron in fortified Spirulina

Acting on the composition of the culture medium it is possible to increase the content of iron in the algal biomass reaching levels up to 3000 mg/kg d.w., higher more than 6 times the content normally present in Spirulina



## Bioaccessibility and iron speciation in fortified Spirulina

- In in vitro simulated digestion tests, Spirulina showed 31% bioaccessibility of Fe content
- C-PC binds the iron present into the biomass, making it absorbable at the level of the gastrointestinal system



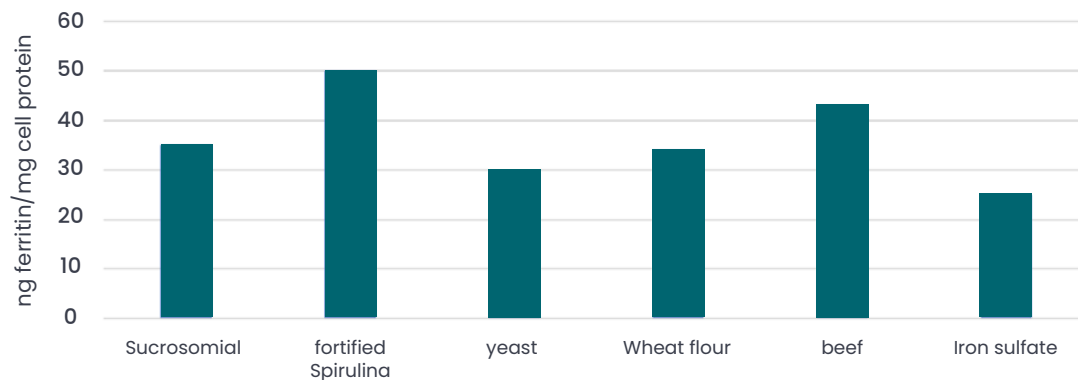
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## The Perfect Solution for your Aerobic Requirement:

- Source of bioavailable iron
- Source of vitamin E. "Alpha - Tocopherol" deficiency lead to weakness and damage of erythrocytes
- Enhance the production of ferritin, leading to a major iron accumulation.

## Bioavailability of iron fortified Spirulina

Spirulina stimulated ferritin production is 1.5 times higher than products normally used as iron supplements



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