

**FerriSTAT™**

## **Bio-Available Chelated Iron**

**Advanced Iron Fortification Solution for Controlling  
Iron-Deficiency Situations Worldwide**

**INTABIOTECH**

**[www.intabiotech.com](http://www.intabiotech.com)**



**FerriSTAT™**

# **Bio-Available Chelated Iron in the control of Iron- Deficiency Situations**

Intabiotech SL is a wholly owned Subsidiary of The ND Pharma & Biotech Co.





# Fighting Anemia: A Global Health Crisis

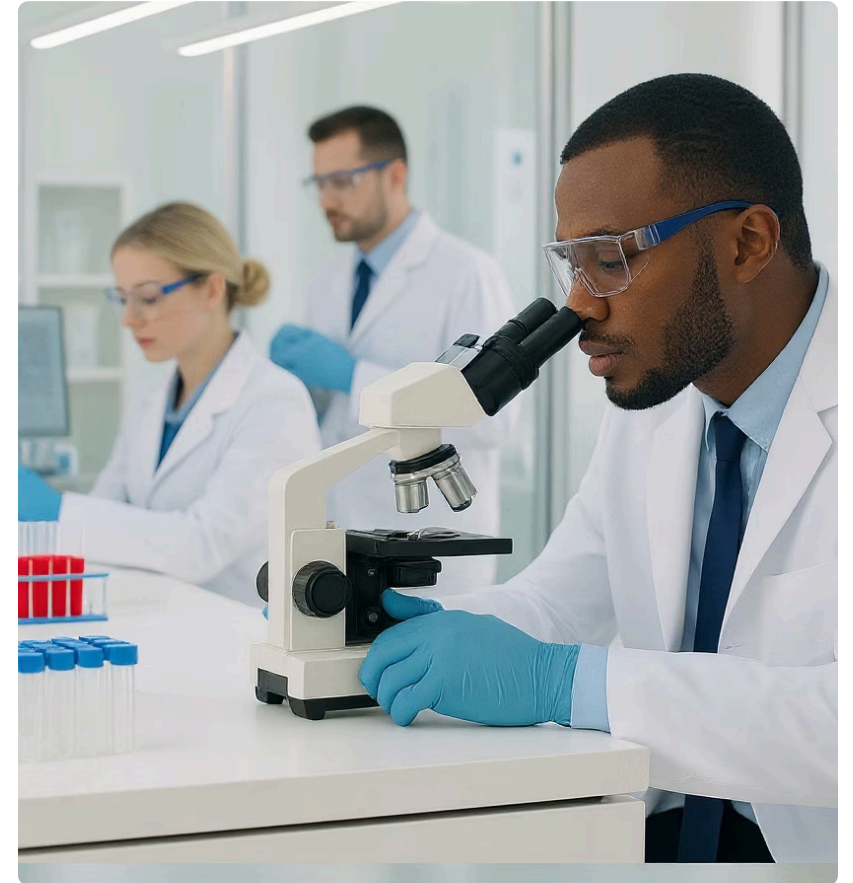
Iron deficiency status, clinically denominated as anemia, represents one of the major health concerns to world population, affecting both developing and industrialized countries. Anemic status affects more than **1.9 billion people worldwide**.

Reduced iron blood levels and tissue deposits cause several symptoms and health conditions that, in certain cases during pregnancy, are associated with incremental risk of mortality. During childhood and infancy, iron deficiencies are associated with significant loss of cognitive abilities and lack of resistance against infections.

# Iron Deficiency and Anemia

Iron should be present in almost all human cells and is a component of major importance within red blood cells to let them carry oxygen to all tissues and organs of the body.

Iron deficiency affects multiple functions. In cases of severe deficiency, it results in anemia. Iron deficiency is the most prevalent nutrition deficiency in the world. As estimated by WHO, **40% of the world's population** is suffering different anemic status.



# Critical Health Statistics

**20K**

## Child Deaths

Annual deaths among children under 5 years due to iron deficiency

**115K**

## Maternal Deaths

Annual deaths from maternal causes attributed to iron deficiency

**42%**

## Pregnant Women

Worldwide percentage with anemia according to WHO surveys

**47%**

## Preschool Children

Global percentage affected by anemia



## Bio-Available Chelated Iron Solution

Sustained anemic status results in lower work productivity in workers, decreased intelligence levels and adaptive capacities in children, and greater risk of lower birth weight babies in pregnant women, with all associated risks during the time anemic status is not rectified clinically.



# FerriSTAT™ for Food Fortification

The most efficient way of prevention and sometimes fighting against iron deficiency anemia is through the fortification of food products with a form of iron that is readily absorbed by the body.

Our Ferric Sodium EDTA, **FerriSTAT™**, is a developed form of chelated iron that has demonstrated to be both safe and effective in reducing iron deficiency through its superior bioavailability and body absorption, especially in diets where inherent compounds inhibit iron absorption, as happens in diets rich in phytates that naturally sequester iron within the intestine.

# Superior Benefits of FerriSTAT™

The main challenge in iron supplementation is avoiding undesirable color and flavor changes while ensuring effective absorption. **FerriSTAT™** has strongly appreciated differences with other iron-supplementation forms:



## Superior Solubility

Well-soluble in water with no metallic taste or aftertaste



## Gentle Formula

No teeth staining, no enamel aggression, no rancidity, no gastric discomfort



## Highly Effective

Works even in presence of phytates - up to 4 times more bioavailable than average iron forms



## Versatile Application

Inert with other ingredients, compounds and elaborations

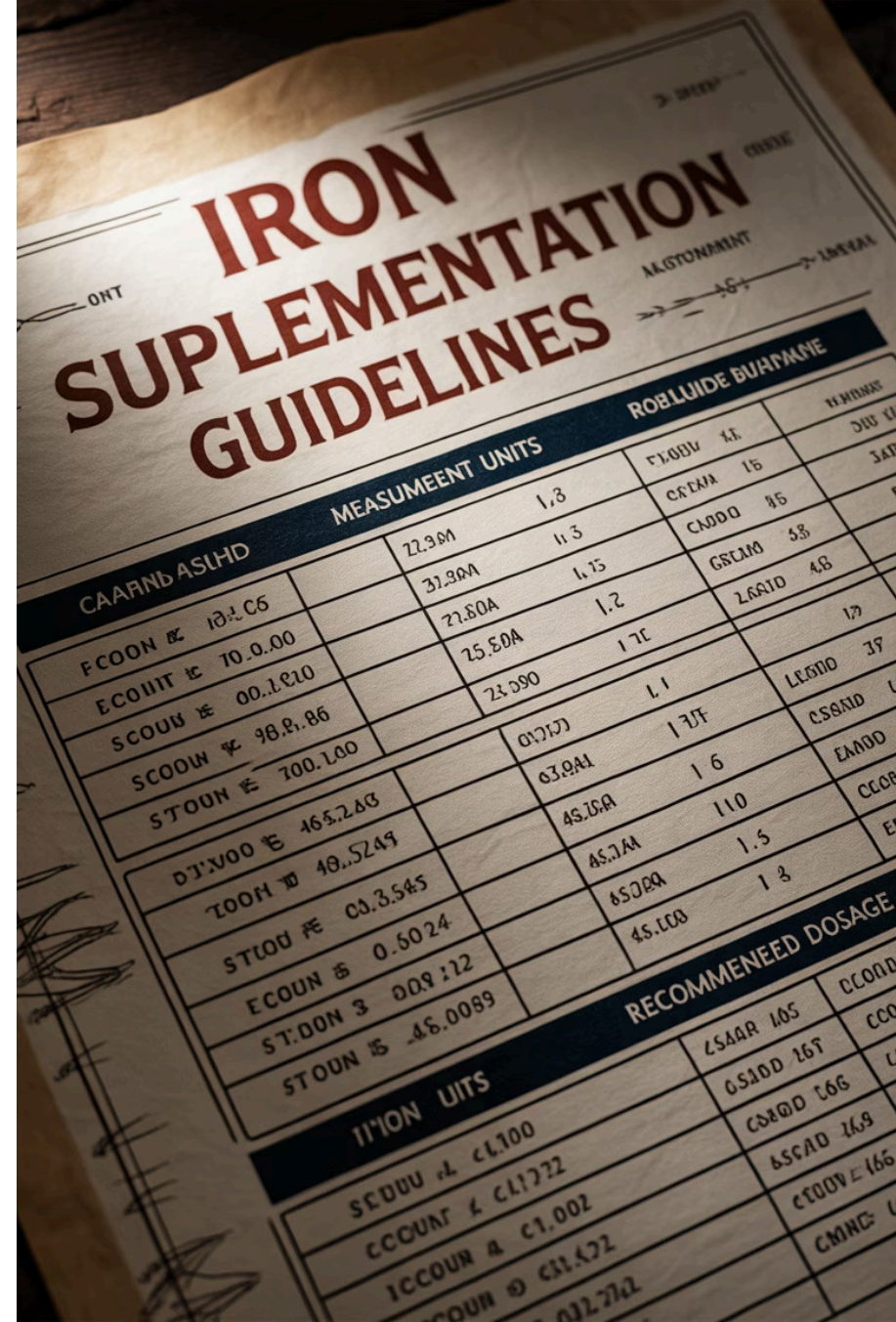
# Guidelines for Use

## Safety Standards

Usage guidelines established under JECFA state that the maximum ADI (Acceptable Daily Intake) for EDTA is **1.9 mg/day/kg** of bodyweight, which equates for FerriSTAT™ chelated iron to be **2.8 mg/day/kg BW**.

## Superior Bioavailability

Ferric Sodium EDTA is at least **3 to 4 times more bioavailable** than comparable sources of iron such as ferrous sulfate or fumarate, which formulators should take into consideration.



# The Science Behind Our Product

Poor or deficient absorption of iron, especially from diets rich in cereals and legumes or foods derived from them, is one of the main factors contributing to the high prevalence of iron deficiency disorders in developed societies.

ND Pharma & Biotech has been promoting the use of Digestion Resistant Oligosaccharides (DROS), which selectively stimulate beneficial bacteria growth in the digestive system, improving the mucosa's capacity to absorb nutrients like Iron.



Iron Absorption

# Enhanced Absorption Mechanism

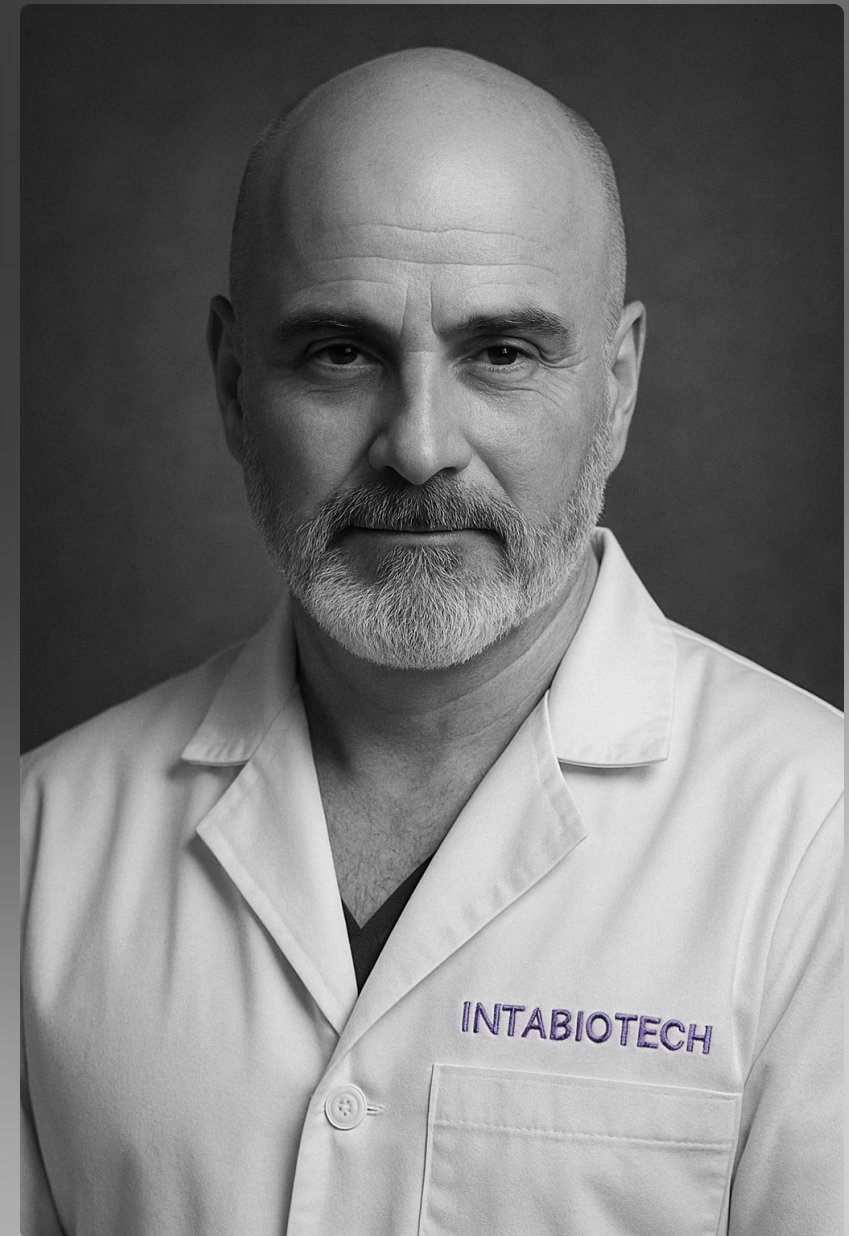
The fermentation of prebiotics by natural microflora in the colon causes a decrease in pH of intestinal contents, promoting reduction from Fe (III) to Fe (II), stimulating epithelial cell proliferation that expands absorption surface area, and potentially stimulating expression of mineral transport proteins in epithelial cells.



# Fortification is Science in Action

Since our inception, ND Pharma & Biotech Co. has collaborated in multiple research projects to support development of strategies, methods and techniques for food fortification to achieve unprecedented levels of development and innovation.

Our comprehensive approach includes application of latest manufacturing technologies, exact evaluation of nutritional requirements of different population groups, assessment of economic and social barriers, and evaluation of current geopolitical realities affecting food access and quality.



# Main Applications

Our product can be used in the vast majority of food and beverage products that may need fortification since it presents great stability and ease of management. It's ideal for mixing with other powders as premixes, pouring into beverages and dry goods, and usable in emulsions like cream and chocolate.



# Wheat, Maize and Flour-Based Products



Bread, pasta, crackers, cakes, and many other foods are made using flour. From cookies to all kinds of bakery and confectionery flour-based foods are among the most consumed worldwide.

Biscuits, instant noodles and breakfast cereals can be fortified with our product. It may also be added to instant powder for milkshakes and special nutrition formulas of vanilla, strawberry, chocolate flavors for children and elderly.

# Drinks and Beverages



Juice, Hot Chocolate, Energy Drinks and Formulas, Coffee, Tea, Milkshakes, Smoothies, Espresso, Special Waters and Sports Foods, Diet Sodas - all can benefit from being fortified or supplemented with our product.

Our product presents great stability and ease of management, making it ideal for beverage applications where taste and appearance are critical factors.

# Supplements and Special Foods

## Vitamins

Multivitamins or individual vitamins like vitamin D and biotin

## Minerals

Calcium, magnesium, and other iron presentations

## Botanicals

Echinacea, ginger, caffeine, and curcumin

## Amino Acids & Probiotics

Tryptophan, glutamine, and live microbials





# Condiments, Sauces & Dressings

Barbecue, Ketchup, Aioli, Vinegar, Salsas, Fish Sauce, Brown Sauce, Creamy ranch dressing, Hot Sauce, Mustard, Relish, Cheese sauce, Balsamic vinegar, Sweet and chili sauce, Chimichurri, Gochujang, Mayonnaise, Tomato Sauce, Soy Sauce, Pesto, Chutney, Tartar, Cocktail sauce, Holland sauce, and Cranberry sauce are different varieties that can be fortified with our product.

These applications are especially important for products consumed in countries with high iron deficiency prevalence.

# Product Overview

**FerriSTAT™** is ideal for use in foods and has been recommended by WHO as the only suitable iron supplement for massive fortification of high phytate cereal flours and all kinds of condiments and sauces like soy and fish.

## JECFA Approved

Officially approved by JECFA, FDA and EFSA in the EU

## Quality Standards

Manufactured under specifications outlined in JECFA Monograph 8th version

## WHO Recommended

The only suitable iron supplement for massive fortification



**FERRISTAT™** can be used as a source of Iron within a number of Food supplements, Dietary Foods and other Fortified Foodstuffs.

- NO metallic taste and undesirable aftertaste.
- NO teeth staining · No teeth-aggressive.
- NO digestive side effects or gastric discomfort.
- Full Water solubility.
- Virtually inert to almost all other food ingredients and compositions.
- Adequate level of absorption in the presence of phytates and other elements.
- Up to 4 times higher bioavailability than ferrous sulphate and other sources of iron used for the supplementation.

EFSA Scientific Opinion, Jan 18, 2010. FDA (GRAS) approved, JECFA approved

3 - Formulas · 3 - Applications:  
Food-Beverages  
Flour (Corn, Wheat, Maize, etc.  
Pharmaceuticals

# FERRISTAT™

EDTA Ferric Sodium Salt

FERRISTAT™ can be used and applied into a variety of foods and food products. As primary application it's used to fortify foods that are stored in dry form such as powdered beverages, candy bars and flour and flour-derived products as bread, biscuits and instant noodles. Colored drinks and condiments, such as cola or soy sauce, and functional foods like fortified cereals or sport drinks are also good targets for iron fortification throughout our product.

FERRISTAT™ can also be used in iron containing food supplements under various forms (like syrups, sprays, tablets and powder sachets). (Novel Food Ingredient).

Iron deficiency ranks among the top ten health issues globally as reported by the World Health Organization (WHO), affecting as many as 2 billion people worldwide. Most affected population groups are infants, school-going children and women of reproductive age. Iron deficiency is also common within people under certain medical conditions as in chemotherapy, etc. As it's known general effects of iron deficiency anemia include a loss of physical endurance secondary to reduced levels of hemoglobin and tissue levels of iron. During pregnancy, iron deficiency anemia is generally associated with increased risk of maternal mortality. Iron deficiency in infancy and childhood is also associated with significant loss of cognitive abilities and decreased resistance to infections. Iron deficiency is commonly associated with developing countries, but even in developed countries a high percentage of adult women have iron intakes below the recommended daily allowance.

Ask Us about Iron Deficiency Syndromes and FERRISTAT™ possibilities

[www.ndpharmabiotech.com](http://www.ndpharmabiotech.com)

# Iron Deficiency?

**FERRISTAT™** can be used as a source of Iron within several Food supplements, Dietary Foods and other Fortified Foodstuffs.

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- No teeth staining - No teeth-aggressive.
- No digestive side effects or discomfort.
- Full Water solubility.
- Virtually inert to almost all other food ingredients and compositions.
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- Up to 4 times higher bioavailability than ferrous sulphate and other sources of iron supplementation.

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## 3 Formulas / 3 Applications:

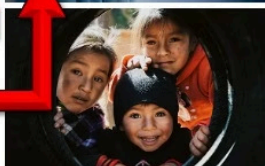
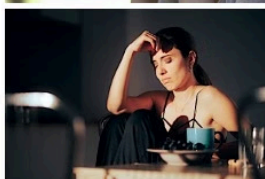
1. Food-Beverages
2. Flour (Corn, Wheat, etc.)
3. Pharmaceuticals, Special Nutrition, OTC, etc.

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# FERRISTAT™

EDTA Ferric Sodium Salt



# Contact Information

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# We're Intabiotech

Intabiotech is a leading company in S&S (Sourcing & Supply) that connects companies from all over the world, both producers and consumers of products and services in the most varied fields from Life Sciences to Industrial sectors.

With a portfolio of more than **300,000 product references** from Biopharmaceuticals, research, innovations in Food and Nutrition (both human and animal), advanced therapies and consumer materials, we are leaders in providing Sourcing & Supply solutions for all needs.

Contact us and discover our potential and how we can be useful to your company or business.

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