

In the
management of
Iron Deficiency...

FIFCAL ADVANCE

Chewable Tablets

**AB-FORTIS (Ferric Saccharate in Microencapsulated form)
75 mg Equivalent to elemental Iron 30 mg**

Formulated with AB-Fortis Microencapsulated Oral Iron Supplementation

- Well-tolerated and safe option for improving iron nutrition
- No metallic taste, oxidation or negative gastrointestinal side effects
- Better alternative compared to conventional irons

Indications

- Iron deficiency anemia
- Pregnancy
- Hemodialysis
- Intestinal mal-absorption

Advantages

- ✓ No Metallic Taste
- ✓ No Side effects of Iron
- ✓ Stable at High temperatures & low pH
- ✓ 40 % Elemental Iron
- ✓ High Bioavailability clinically proven.

Dosage One tablet daily



DELIVERS IRON WITH INCREASED BIOLOGICAL ABSORPTION



IRON DEFICIENCY ANEMIA

A MAJOR PUBLIC HEALTH PROBLEM,
PARTICULARLY IN INFANTS, YOUNG CHILDREN,
PREGNANT WOMEN, & FEMALES'



Introducing FIFCAL-ADVANCE :
Microencapsulated Iron Salt with
patented technology.

Providing highly stable
microencapsulation that prevents the
release of free iron in the food matrix.

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Process of Microencapsulation

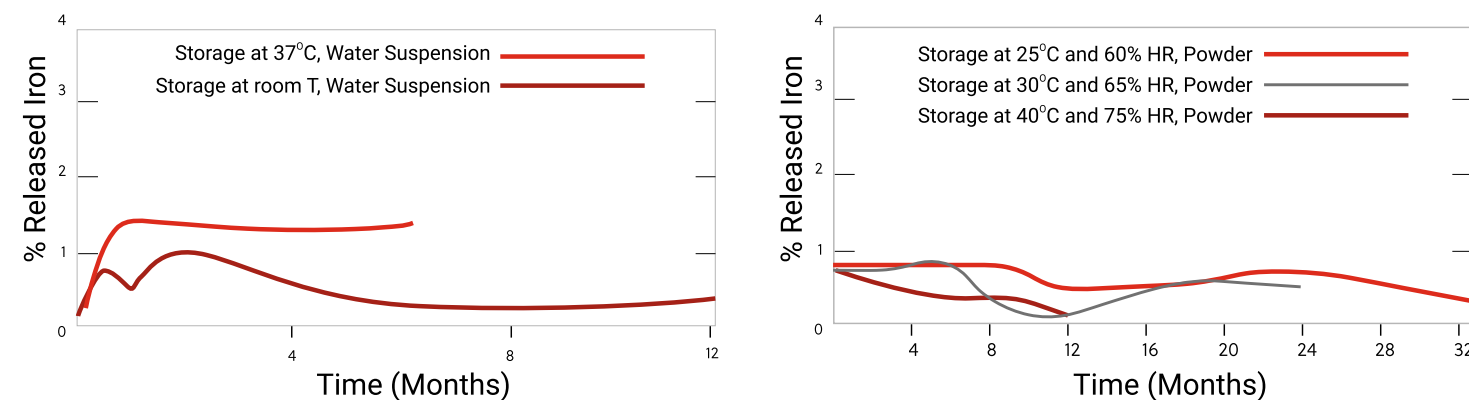
FIFCAL-ADVANCE is a microencapsulated form of Ferric Saccharate.



- ▶ The microcapsules are produced by ionotropic gelation of alginate with calcium, entrapping the iron salt inside.
- ▶ Calcium displays a strong interaction with alginate, stabilizing the microcapsules and avoiding the release of iron.

Stability

FIFCAL-ADVANCE is made with a organic polymer, which offers an excellent degree of protection and minimal release of iron into the medium during storage of the fortified product.



Pressure Stability

FIFCAL-ADVANCE is very stable under high pressure of 1000 bars.

Pressure(bars)	0	200	350	500	1000
Total Iron (ppm)	10.4	10.4	10.4	10.4	10.4
Free Iron (ppm)	0.10	0.16	0.18	0.18	0.19
% Released	0.96	1.54	1.73	1.73	1.83

Less than 2% of iron is released at 1000 bar.

Temperature Stability

FIFCAL-ADVANCE is very stable under high temperature of 125°C.

Time at 125°C	30 min	3h
Total Iron (ppm)	11.0	11.0
Free Iron (ppm)	0.04	0.03
% Released	0.36	0.27

Less than 2% of iron is released at 1000 bar.

Particle Size of FIFCAL-ADVANCE

Approximate Particle size of 20µg.

No taste and an excellent stability.

Suitable for the fortification of liquid and solid foodstuffs.

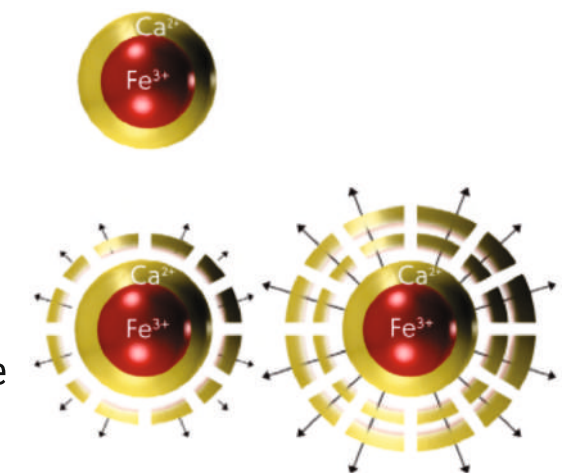
Iron fortified products can be manufactured with minimal organoleptic modification.

Iron Absorption

Calcium coating of iron salts is highly stable in storage and during fortified product preparation.

Calcium-polymer interaction is destabilized during digestion at basic pH.

The iron is then released from the microcapsule and made available for absorption.



Comparison with other forms of iron

	Insoluble Iron Salts	Soluble Iron Salts	FIFCAL-ADVANCE
Taste	None	Metallic taste	None
Oxidation	Not Reactive	Reactive	Not Reactive
Bioavailability	Low or No bioavailability	High bioavailability	Controlled release & high bioavailability
Side Effects	No reactivity	Unpleasant taste & Gastro-intestinal discomfort	Reduced side effects