PRODUCT IN FOCUS

EXSYN®
ESSENTIAL CHEMISTRY

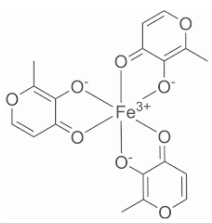
Ferric Maltol

INTRODUCTION

Ferric maltol is an oral iron complex composed of ferric iron (Fe^{3+}) chelated with maltol, designed to improve iron absorption while reducing common gastrointestinal side effects associated with traditional iron salts. It is primarily used in the management of iron deficiency with better tolerability.

MANUFACTURE

Ferric maltol is manufactured by complexing ferric iron salts with maltol under controlled aqueous conditions, followed by purification and drying to obtain a stable iron–maltol complex. The process ensures consistent chelation, optimal iron content, and high product purity suitable for pharmaceutical use.

Synonym(s)	Iron(III) 2-methyl-4-oxo-4H-pyran-3-olate
CAS no.	33725-54-1
Molecular formula	$C_{18}H_{15}FeO_9$
Molecular weight	431.2
Structure	

APPLICATIONS

Primarily used for the management of iron deficiency. Its key applications include:

- **Treatment of iron deficiency anemia (IDA):**
  Used in adults who cannot tolerate or do not respond well to conventional oral iron salts (such as ferrous sulfate).
- **Inflammatory bowel disease (IBD) patients:**
  Particularly beneficial in patients with Crohn's disease or ulcerative colitis, as it has better gastrointestinal tolerability and minimal mucosal irritation.
- **Chronic iron deficiency conditions:**
  Suitable for long-term iron supplementation in conditions requiring sustained iron replacement, including chronic blood loss or malabsorption.
- **Patients requiring improved compliance:**
  Due to fewer gastrointestinal side effects (nausea, constipation, abdominal pain), ferric maltol improves adherence compared to traditional iron therapies.
- **Pharmaceutical formulations:**
  Used in oral solid dosage forms such as capsules and tablets for prescription iron therapy.

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SPECIFICATIONS

Test	Unit	Specification
Description	-	Dark red to deep Brown, free flowing powder
Solubility	-	Freely soluble in dichloromethane, sparingly soluble in wáter
Identification	-	a. Positive for Iron b. Absorbance maxima is about 274 NM
pH (of 5% w/v aqueous solution)	-	6.0 - 9.0
Water content (by KF)	% w/w	NMT 6.0
Arsenic	ppm	NMT 2.0
Heavy metal (as Pb)	ppm	NMT 20.0
Copper	ppm	NMT 30.0
Zinc	ppm	NMT 30.0
Chloride (on anhydrous basis)	w/w	NMT 3.0
Maltol content by HPLC (on anhydrous basis)	w/w	NLT 80.0
Related substance by HPLC a. Any unspecified impurity b. Total impurities	 % %	 NMT 0.1 NMT 0.5
Iron content (on anhydrous basis)	% w/w	NLT 11.0
Total microbial count	CFU/gm	NMT 1000
Yeasts & Mould	CFU/gm	NMT 100
Salmonella	-	Should be absent per 10 gm
E.Coli	-	Should be absent per gm
Staphylococcus aureus	-	Should be absent per gm
Pseudomonas aeruginosa	-	Should be absent per gm

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PACKING
25 kg HDPE drum

STORAGE
Store in a cool, dry place at room temperatures. Reclose packaging immediately after use.

CERTIFICATION
US-DMF available.

ExSyn offers Ferric maltol on commercial scales and welcomes enquiries. Our exceptional quality and service will make ExSyn your supplier of choice! If you need any additional information or SDS, please contact us.