



PRODUCT DESCRIPTION AND SPECIFICATION

ISOMALTOSE OLIGOSACCHARIDE 500 – ST (IMO 500 SYRUP ST)

Introduction

IMO is produced by enzymatic modification of High Maltose Syrup to produce α -D (1-6) glycosidic linkages. It is a product that is not digestible by humans.

When the undigested IMO gets to the hosts colon it is consumed by the beneficial bacteria in the colon. IMO is a powerful growth factor for bifidobacteria and lactobacilli.

The growth of these beneficial bacteria suppresses the growth of harmful bacteria in the colon. This gives rise to the benefits of IMO.

Benefits of IMO 500 SYRUP ST

1. Enhanced growth of beneficial microbes and suppression of harmful microbes in the gut.
2. Improves peristalsis of intestines
3. Prevents constipation
4. Enhances immunity

IMO can be considered to be a "Prebiotic". A prebiotics can be defined as "a non-digestible food ingredient that benefits the host by selectively stimulating the growth and/or activity of beneficial microbes in the colon thereby suppressing the growth and/or activity of harmful microbes in the colon".

Chemistry of IMO 500 SYRUP ST

The main constituents of IMO are

- (i) Isomaltose
- (ii) Panose
- (iii) Isomaltotriose and
- (iv) Branched higher oligosaccharides

Specifications of IMO 500 SYRUP ST

Dry Solids Content	75%
Percentage IMO on dry matter basis	50% +
Percentage Isomaltose, Panose and Isomaltotriose on dry matter basis	35% +
pH of 50% solution	4.0 – 6.0
Ash	Below 0.3%

Physical Properties of IMO 500 SYRUP ST

1. A pale straw coloured liquid with a level of sweetness 50% that of sucrose.
2. A product with low viscosity, easily blended into foods giving a good mouth feel.
3. A hygroscopic product which helps to prevent retrogradation of starch in baked goods. Gives softness to baked products.
4. The product is heat stable under baking conditions.

Main Area where IMO 500 SYRUP ST may be used.

1. In beverages, cordials, fruit juices
2. In Dairy Products – eg yogurt drinks, ice cream
3. In Baked Products – Bread, Buns, Cakes, Biscuits

Dosage of IMO

Clinical studies to show benefits of IMO have been done in the dosage rates of 20g IMO per adult of 70kg body weight.

People eat a variety of foods, some of which are prebiotic. It is not expected that any one food will supply all of the daily requirement of prebiotics.

Food manufacturers who incorporate IMO into their products do so in lower dosages per helping

eg 1g of IMO per biscuit or slice of bread
up to 6g of IMO per bottle of drinking yougurt

Packing

IMO 500 SYRUP ST is available in 25kg plastic pail.

Storage

IMO 500 SYRUP ST is to be stored in a cool dry place. It is best used within one year of production date.

Date of Issue: November 2016

References

- (i) Proliferation of Bifidobacterium in Intestinal Flora
(Bifidobacteria Microflora 7 , 61 (1988))
- 13.5g of IMO was fed daily to elderly subjects (age 50 – 93 years old)
 - The percentage of Bifidobacteria (good bacteria) in the intestines increased from 3.2% before intake of IMO to 12.5% on 10th day of intake to 20.0% on 14th day of intake.
 - The percentage of Bifidobacteria (good bacteria) in the intestines reverted back to 4% 14 days after the end of intake.
 - The benefits to younger subjects was less significant than to elderly subjects.
- (ii) Improvement of Intestinal and fecal conditions
(Agric Biol Chem 55 2157 (1991))
- The benefits of IMO included
- Fecal pH – Decreased
 - Fecal content of short chain fatty acids – Increased
 - Fecal content of putrefactive products – Decreased
 - Frequency of Constipation – Decreased

IMO is the most widely used prebiotic in Japan

IMO is widely used in China