OLIGOWELL
Growell with Oligowell

PRODUCT DETAIL
OLIGOWELL
Inulin Complex
(Inulin & Fructooligosaccaride)

BY:
GROWELL VENTURE PLT
Co Reg No: LLP0007469-LGN
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UNIVERSITI PUTRA MALAYSIA, SERDANG, SELANGOR, 40000, MALAYSIA
Product Specification

Product Name:
Oligowell™ Inulin Complex (Inulin & Fructooligosaccharide)

Chemical Structure:

![Chemical Structure Diagram]

<table>
<thead>
<tr>
<th>Details</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance (Color)</td>
<td>Clear</td>
</tr>
<tr>
<td>Appearance (Form)</td>
<td>Liquid</td>
</tr>
<tr>
<td>Solubility (Color)</td>
<td>Colorless</td>
</tr>
<tr>
<td>Solubility (Turbidity)</td>
<td></td>
</tr>
<tr>
<td>Odour</td>
<td>No</td>
</tr>
<tr>
<td>Quality</td>
<td>Very High</td>
</tr>
<tr>
<td>Purity</td>
<td>95-98%</td>
</tr>
<tr>
<td>Dietary Fiber %</td>
<td>≥ 90%</td>
</tr>
<tr>
<td>Fructose, glucose &amp; saccharose %</td>
<td>≤ 10%</td>
</tr>
<tr>
<td>Brand Name</td>
<td>Oligowell™</td>
</tr>
</tbody>
</table>
Product Name: Inulin Complex
Type of Product: Functional Food
Grade: Food Grade
Certification: GMP
Method of Analysis: AOAC 997.08
Volume: 1 Liter
Place of Origin: Malaysia

<table>
<thead>
<tr>
<th>No</th>
<th>Type of product testing</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Proximate Analysis</td>
<td>i. Total Dietary Fiber</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Carbohydrate Testing</td>
</tr>
<tr>
<td>2</td>
<td>Miscellaneous Analysis</td>
<td>i. pH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Water activity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. Viscosity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv. Color</td>
</tr>
<tr>
<td>3</td>
<td>Sugar Analysis</td>
<td>i. Glucose, Sucrose, Fructose</td>
</tr>
<tr>
<td>4</td>
<td>Microbiological Analysis</td>
<td>i. Coliform</td>
</tr>
<tr>
<td>5</td>
<td>Shelf life Analysis</td>
<td>i. Shelf Life Material</td>
</tr>
</tbody>
</table>
## Packaging & Delivery

### Packaging Details:

1: According to customer’s requirement!

### Delivery Detail:

Delivery in 7 days after payment

<table>
<thead>
<tr>
<th>SKU/Pack Size</th>
<th>Price</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>5ml</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8ml</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10ml</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15ml</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50ml</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100ml</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000ml</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Inulin Complex is a chain oligosaccharide. Inulin Complex is a prebiotic ingredient, low calorie, non-reducing complex sugar having sugar-like taste. It is obtained from vegetables and fruits.

**Physicochemical properties of Inulin Complex:**

1. **Inulin Complex** features good thermal stability, viscosity, water activity, moisture retention, solubility, non-pigmentation, shaping, alkali resistance, anti-aging, and other physio-chemical properties.
2. Therefore, **Inulin Complex** can meet the processing requirements of various foods production. Whereas it features low sugariness, fresh and mellow taste, **Inulin Complex** can be used to reduce sweetness and improve the taste of certain foods.
3. **Inulin Complex** reaches large intestine without being digested/absorbed in the upper digestive tract. Thus, it can be included in limited caloric intake diets.

Oligowell@Inulin Complex (Inulin+Fructooligosaccharide)

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caloric Value</td>
<td>1.5kcal/g</td>
</tr>
<tr>
<td>Sweetening Power</td>
<td>50%</td>
</tr>
<tr>
<td>Glycaemic Index</td>
<td>0</td>
</tr>
<tr>
<td>Taste profile and rheology similar to sucrose</td>
<td></td>
</tr>
<tr>
<td>Non-Digestible Oligosaccharides (NDO)</td>
<td></td>
</tr>
</tbody>
</table>
Biosynthesis from watermelon juice concentrates by enzymatic reactor: Produce the Oligowell@Inulin Complex (Inulin+Fructooligosacharide) from natural sources - phytoenzymes from watermelon

The Process of Inulin Complex production

Sucrose

Bio-enzymatic transformation

OLIGOWELL
FOS

G = glucose
F = fructose

Functionalities of Oligowell@Inulin Complex (Inulin+Fructooligosacharide)

<table>
<thead>
<tr>
<th>Physiological Functionalities of Inulin Complex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention of dental caries</td>
</tr>
<tr>
<td>Safe in diabetics</td>
</tr>
<tr>
<td>Proliferation of bifidobacteria and reduction of detrimental bacteria</td>
</tr>
<tr>
<td>Reduction of toxic metabolites and detrimental enzymes</td>
</tr>
<tr>
<td>Prevention of pathogenic and autogenous diarrhea</td>
</tr>
<tr>
<td>Prevention of constipation</td>
</tr>
<tr>
<td>Protection of liver function</td>
</tr>
<tr>
<td>Reduction of serum cholesterol</td>
</tr>
<tr>
<td>Reduction of blood pressure</td>
</tr>
<tr>
<td>Anticancer effect</td>
</tr>
<tr>
<td>Production of nutrients</td>
</tr>
</tbody>
</table>
Application of Inulin Complex-Inulin+FOS in

Sugar Replacement +

- Nutritional Benefit
- Preserved Taste

Ice Creams

- Sugar and fat reduced
- Energy Reduced
- Melting kinetic similar to the existing product
  Improve spoonability

Candy and Gelatine Gum

- Sugar free
- Tooth friendly
- Energy Reduced
- Elasticity and hardness similar to the existing product
  Improve brightness

Dairy Desserts

- Sugar free
- Taste and texture more

Cereal Bars

- Reduced Sugar
- Enhance quality of Crispness, stickiness and softness
Application of Inulin Complex-Inulin+FOS in

Fibre Enrichment +

- Nutritional Benefit
- Preserved Taste

Biscuits
- High fibre
  Sugar reduce
- Enhanced flavours
  No over-browning

Yogurt
- High fibre
  Less sugars
- Improved mouthfeel
  In fat free product
- Masking effect on after tastes of intense sweeteners

Breakfast cereal
- High fibre
  Sugars reduced
- Cereal flavours enhancement
  Limited maillard reaction in extruded products
Application of Inulin Complex-Inulin+FOS in

Digestion & Dietary Functionality

Animal Feed

- Prebiotic functionality
- Enhanced digestibility
- Enhanced mineral calcium and protein absorption.

Dietary Supplement

- Reduce cholesterol
- Reduces lipid

Dairy Product

- Fibre enrichment
- Prebiotic effect
- Improves the mouthfeel
Most effective fiber

- 95% fibres = 95% non-digestible
- Instant soluble fibre of vegetable origin
  - Taste profile similar to sucrose

Growell with Oligowell

Miracles Ingredient

- No Millard reaction
- Non viscous fibre
- Flavour enhancer
Health Benefit

Improves digestive comfort
• Decreases intensity and frequency of digestive disorders

Improves immunity & reinforces natural defenses
• Reinforces the intestinal barrier effect
• Reduces potentially pathogenic bacteria

Growell with Oligowell

Miracles Ingredient

• Reduces carcinogens exposure

Improves mineral absorption
• Enhances magnesium bio-availability

Positive influence on lipids metabolism
Bring well-being to your recipes with OLIGOWELL@Inulin Complex the most active prebiotic fibre

- No sugars, no glycaemic response
  - Less calories
  - More fibres
  - Bifido-active effect
- Improved digestive comfort
  - Easy to use
  - Nice sweet taste

Nutritional and health benefits of OLIGOWELL@Inulin Complex have been scientifically proven.