Communiqué

Product Name: VitaFiber™-IMO (Isomalto-oligosaccharide)
Product Forms: Powder or Syrup
Product Nature: 100% natural or 100% Organic (certified)
Other Properties: Non-GMO; Sugar-free; Gluten-free

Product Profile:

- For the product's information, recommended usage, certifications, nutritional facts, carbohydrates, dietary fiber, mineral and microbial levels, please see product's specification sheets. VitaFiber™ is FDA-GRAS for use as a food ingredient throughout the entire spectrum of food and beverage applications in America. (FDA-GRAS No. 00246; website:http://www.fda.gov/Food/FoodIngredientsPackaging/GenerallyRecognizedasSafeGRAS/GRASListings)
- VitaFiber™ is a natural as well as certified Organic prebiotic fiber sweetener providing low calorie, (sweetness level is about 60% compared to that of sucrose) and soluble prebiotic dietary fiber for human digestive health.
- Our Basic product is also available in blended form with other natural high-intensity sweeteners; VS-100, VS-120 and VS-250 (~100%, ~120% and ~250% in sweetness compared to that of sucrose, respectively).
- The fiber contents in IMO are determined by an established HPLC-RI method.
- Dietary fiber content in powder form is >90% and in syrup form is > 65%.
- Caloric value for powder form is 156 kcal/100gm and for syrup form is 122 kcal/100gm.

Functional Claims

I) Based upon the scientific studies, following health claims will be used for VitaFiber™-IMO products;

a) A source of Dietary Fiber
b) Effective as Prebiotic
c) Improving Overall Gastrointestinal Health
d) A Low Calorie Health Sweetener

II) Following claims are supported by some scientific studies and further studies are in progress;

a) Helps maintain healthy cholesterol levels
b) Helps maintain healthy blood sugar levels
c) Has a low Glycemic Index (GI)
d) Helps in mineral absorption
e) Least flatulence

(A list of scientific papers are enclosed herewith for reference purposes in respect of each of the above health claims. PDF copies of the full papers are available upon request)

Scientific References:

a) Source of Dietary Fiber:

- B.C. Tungland et al.,; Comprehensive Reviews in Food Science and Food Safety; "Non-digestible oligo- and polysaccharides (dietary Fiber): Their physiology and role in human health and food", 2002, vol. 1, page 73-92
- Taisuke N., et al, (2006) An improved method for the quantitative analysis of commercial IMO products using the calibration curve of standard reagents. J. Appl. Glycosci. 53;215-222
- AACC Report (March 2001) "The Definition of Dietary Fiber", Vol. 46, No. 3, Page 112
- Hayakawa K., et al., (2000) "Determination of saccharides in sake by HPLC with polarized photometric detection", Biomed. Chromatogr 14:72-76

b) Effective as Prebiotic:

- Rycroft, C.E., et al., (2001) A comparative in vitro evaluation of the fermentation properties of prebiotic oligosaccharides. J. Appl. Microbiol. 91(5):878-887
- Kohmoto, T., et al., (1988) Effect of isomalto-oligosaccharides on human fecal flora. Bifidobacteria Microflora 7(2):61-69
- Kaneko, T., et al., (1990) [Acute and chronic toxicity and mutagenicity studies on isomaltooligosaccharides, and the effect on peripheral blood lymphocytes and intestinal microflora. Shokuhin Eiseigaku Zasshi 31(5):394-403
- Qing, G., et al., (2003) Study on the regulative effect of isomaltooligosaccharides on human intestinal flora. Wei Sheng Yan Jiu 32(1):54-55
- Chen, H.-L., et al., (2001) Effects of isomalto-oligosaccharides on bowel functions and indicators of nutritional status in constipated elderly men. J. Am. Coll. Nutr. 20(1):44-49
- Kaneko, T., et al., (1993) Effects of isomaltooligosaccharides intake on defecation and intestinal environment in healthy volunteers. Nihon Kasei Gakkaishi 44(4):245-254
- Kohmoto, T., et al., (1991) Dose-response test of isomaltooligosaccharides for increasing fecal bifidobacteria. Agric Biol Chem 55(8):2157-2159
- Kaneko, T., et al., (1994) Effect of isomaltooligosaccharides with different degrees of polymerization on human fecal bifidobacteria. Biosci. Biotech. Biochem. 58(12), 2288-2290
- Claire L. Vernazza, et al., (2006) Carbohydrate preference, acid tolerance and bile tolerance in five strains of Bifidobacteria. J. Appl. Microbiol. 100;846-853

c) Improving Gastrointestinal Health:

- Hsiao-Ling Chen, et al., (2001) Effects of Isomalto-oligosaccharideson bowel functions and indicators of nutritional status in constipated elderly men. J. Amer. College. Nutri., 20 (1), 44-49

d) Low Calorie Health Sweetener:

- Roberfroid MB., (1999) Caloric value of inulin and oligofructose. J. Nutr. 129, 1436-1437S
- Nakanishi T., et al., (2006) An Improved method for the quantitative analysis of commercial isomalto-oligosacchride products using the calibration cure of standard reagents. J. Appl. Glycosci., 53, 215-222

e) Helps in relieving constipation:

- Hsueh-Fang Wang, et al., (2001) [Use of isomaltooligosaccharide in the treatment of lipid profiles and constipation in hemodialysis patients] J. Renal Nutri., 11 (2) 73-79
- Hsiao-Ling Chen, et al., (2001) Effects of Isomalto-oligosaccharideson bowel functions and indicators of nutritional status in constipated elderly men. J. Amer.College. Nutri., 20 (1), 44-49

f) Least Flatulence:

- Rycroft, C.E., et al., (2001) A comparative in vitro evaluation of the fermentation properties of prebiotic oligosaccharides. J. Appl. Microbiol. 91(5):878-887

g) Helps maintain healthy cholesterol levels

- Hsiao-Ling Chen, et al., (2001) Effects of Isomalto-oligosaccharideson bowel functions and indicators of nutritional status in constipated elderly men. J.Amer.College.Nutri., 20 (1), 44-49

h) Helps maintain healthy blood sugar levels

- Sheng G.E., et al, (2006) Determination of Glycemic Index of Xylitol and Isooligosaccharide. Clin. J. Clin. Nutr., 14 (4); 235-237
- Hesta M., et al, (2001) The effect of a commercial high-fiber diet and an isomalto-oligosaccharide-supplemented diet on post-prandial glucose concentrations in dogs. J. Anim. Physiol, 85; 217-221

i) Has a low Glycemic Index (GI)

- Sheng G.E., et al, (2006) Determination of Glycemic Index of Xylitol and Isooligosaccharide. Clin. J. Clin. Nutr., 14 (4); 235-237

j) Helps in Mineral Absorption:

- Ohta A., et al., (1993) Effects of Fructo-oligosaccharides and other saccharides on Ca, Mg, and P absorption in rats. J. Jpn. Soc. Nutr. Food Sci., 46, 123-129.

- Mineo H., et al., (2001) Various indigestible saccharides enhance net calcium transport from the epithelium of the small and large intestine of rates in vitro. J. Nutr. 131, 3243-3246.

k) Anticaries (Anti-dental cavity) activity:

- **IMO did not induce significant dental caries in rats….. An Animal Study"**

  Tsunehiro J, et al., (1997) Biosci Biotechnol Biochem 61(8) 1317-22

- **"IMO did not inhibit the caries which was induced by sucrose….. An animal study"**

  Minami T, et al., (1989) Shoni Shikagaku Zasshi 27(4) 1010-7

- **"Addition of IMO to sucrose-containing diet resulted in significant reduction of caries….. An animal study"**

  Tsunehiro, J., Biosci Biotechnol Biochem. 1997 Dec; 61(12):2015-8

****