



FUNCTIONAL MALTODEXTRIN

AGENANOVA® 30.326

SOLUBLE CARBOHYDRATES – THE “LIQUID PASTA”

Maltodextrins are a group of carbohydrate entities resulting from the more or less partial hydrolysis of starch. These polysaccharides (oligosaccharides, maltotriose, maltose, glucose ect.) are a reserve molecule for higher plants and an essential component of the human diet. Starch has a dextrose equivalent (DE) value of 0. Maltodextrins may vary between DE >0 and <20. The higher the DE, the higher the glycemic index (GI) will be and vice versa. The GI represents the impact of food on blood glucose. High glycemic foods result in a quick spike in blood sugar and insulin. Low glycemic foods have a slower, minor effect. Maltodextrins with low GI are perfect for setting in reserve of glycogen.

In general, maltodextrins are well tolerated by the body, easily digestible, being absorbed as rapidly as glucose, and might either be moderately sweet or have hardly any flavor at all, they are odorless and easily dissolved and therefore very interesting for powder formulations to dilute with water!

(Adapted from: Nicolas AUBINEAU, Sports Dietitian Nutritionist, <https://www.nicolas-aubineau.com/en/>)

Combining all benefits, AGRANA developed a completely new range of functional maltodextrins, where the complexity of the carbohydrates is maintained. DE <1 is achieved by re-allocation of the starch molecule to ensure constant blood sugar levels over time in combination with solubility character of a maltodextrin. So basically AGENANOVA® is a maltodextrin based on pure waxy corn starch.



Trends



- Sports nutrition
- Reliable energy supply
- Clean Label
- Vegan
- Low sugar
- Non-GMO



DE-VALUE < 1

8 ADVANTAGES

- >98 % Amylopectin – high branching factor – alike Glykogen
- Highly soluble in cold water – despite complex carbohydrate structure
- Transparent in solution and low osmotic pressure
- Not sweet in taste compared to other maltodextrins
- Significantly reduced starchy taste compared to low-DE-Maltodextrins
- Limited viscosity formation – compared to standard pregelatinized starches
- No retrogradation – no clouding!
- Excellent storage stability



HIGHLY SOLUBLE & TRANSPARENT

SOLUTIONS

FOR THE ENTIRE SPORTS NUTRITION RANGE

GENERAL BENEFITS OF AGENANOVA® IN NUTRITION*

- Complex soluble carbohydrate – prolonged carbohydrate supply
- Allows high density of energy in beverages and gels (high solubility, low viscosity)
- Transparent and shiny liquid products – product stability, mouth feeling and appearance
- Carb supply is more stable over time
- Sugar level dropdown (“crash”) is lower
- Low osmotic pressure due to high molecular mass and low amount of sugars

*based on internal lab trials 2017 + 2018 compared to dextrose and maltodextrins or even competitive sports products

APPLICATIONS

- Energy gels
- Energy powders
- Bodybuilding – mass gainers
- Pre-workout products
- Isotonic beverages – endurance sports
- Beverage powders
- Adhesive for muesli/snack/energy/protein bars
- Blending component for protein powders



AGRANA'S COMPLEX SOLUBLE CARBOHYDRATES

- Are a perfect energy source for
- sports
 - geriatric
 - adult/clinical and infant nutrition

8 BENEFITS IN ENERGY GELS*

- High concentration of carbs possible for intake without challenging the stomach
- High energy density of complex carbohydrates having prolonged reliability in supply
- Shorter residence time is indicated
- Gastrointestinal distress is reduced
- Sport duration of three or more hours are aided by providing energy from AGENANOVA®
- Optimum combination with fructose – increased uptake of carbs
- Preferred in pH-neutral, isotonic formulas
- Usually in combination with sodium, calcium, magnesium and potassium

*based on clients experience by expert tests



CROSS-APPLICATIONS

- Ice Cream – crystallization inhibitor, melting properties
- Candies and fruit preparations – sugar reduction and lowering water activity
- Non-Sweet Carrier