



WORLD GOOD
WAY INC. INTERNATIONAL
TRADING

Dextrose



DEXTROSE

General Information

Dextrose ($C_6H_{12}O_6$) is a natural sugar present widely in nature. As a constituent of cellulose, starch and glycogen, it is found in all plants and animals. Dextrose is widely used in the food and beverage industries as natural sweetener, acidulant, carbohydrate source, preservatives and stabilizing agent among others. It has several industrial and pharmaceutical uses as well.



Specification

World Good Way Inc. supplies dextrose monohydrate and anhydrous which complies with requirements of British Pharmacopoeia (BP), European Pharmacopoeia (EU), Japanese Pharmacopoeia (JP) and US Pharmacopoeia (USP).

Characteristics

Citric acid anhydrous and monohydrate occurs as white crystalline powder of high purity. Citric acid in monohydrate form contains one molecule crystal water in contrast to anhydrous dextrose, which contains none.

Dextrose monohydrate (DMH) is obtained by enzymatic hydrolysis of starch to dextrose and subsequent purification and crystallization from solution. It is sweet in taste, free from foreign flavor and finds wide applications due to its inherent quality of being an instant energy source. DMH does not require conversion before assimilation into the human system and is, therefore, very popular in the pharmaceutical and energy products.

Dextrose anhydrous is the purest form of dextrose, commonly called glucose. It is manufactured by refining dextrose monohydrate, itself a pure form of dextrose.



Citric Acid Anhydrous



Citric Acid Monohydrate

Unique Properties of Dextrose



Dextrose is widely used in numerous consumer products, from food to beverage and pharmaceuticals. It offers formulators a combination of unique benefits:

- As natural sweetener, dextrose is a preferred ingredient in a wide range of food products. It is one of the sweetest of starch derived sugars. The sweetness of dextrose is influenced by a variety of factors such as temperature, acidity, salts, flavoring materials, sweetener concentration and the nature of sugar present. Not like sucrose, dextrose is not subject to the process known as inversion, and therefore its degree of sweetness does not change.
 - Food containing dextrose offers a distinct cooling sensation effect in the mouth. The perception of sweetness is shortened and flavor enhancement is improved. This is attributed to the unique heats of solution of dextrose monohydrate (-105.5 J/g) and of anhydrous dextrose (-59.3 J/g) which is 10 times greater than for sucrose.
 - Dextrose's ability to decrease freezing point makes it a good ingredient for ice cream industry.
 - Dextrose improves shelf life of food due to its ability to exert higher osmotic pressure which provides commanding preserving action against spoilage.
 - As a carbohydrate source, dextrose is good for yeast fermentation in baking and brewing. Dextrose gives energy to the cell to produce many by-products in addition to carbon dioxide and ethanol.
 - As a reducing sugar, dextrose improves the inhibition of oxidative degradation, thus increasing color stabilization.
 - The occurrence of dextrose in various particle size distributions and granulations makes it a good bulking agent for food products.
-

Applications

The application of dextrose in the food and beverage industries is all encompassing. The table below shows some of the main uses of dextrose for the food and beverage companies.

TABLE OF APPLICATIONS	
Product	Main Functions
Chocolate	Provides tendering effect; Can replace sucrose
Panning	Reduces panning time and drying time
Tablets	Provides cooling effect
Chewing Gum	Enhances flavor and balances sweetness
Candy Filling	Sweetener, Flavor Enhancer
Marshmallows	Provides tendering effect
Toffees, caramels, fudge	Color enrichment
Soft Drink	Enhance flavor, sweetener
Energy Drink	Provides easily digestible carbohydrates
Light Beers	Provides carbohydrates for fermentation
Specialty Beers	Provides carbohydrates for fermentation
Wines	Provides carbohydrates for fermentation
Biscuits and Cookies	Rapid coloring, excellent crispness and preserving effect
Icings and Glazes	Balances sweetness
Cakes	Enhances color, provides preserving and tendering effect
Creams and Fillings	Balances flavor and sweetness
Breakfast Cereals	Balances sweetness and influences brown coloring
Dried Fruits	Enhances flavor
Frozen Desserts	Depresses freezing point
Dessert	Balances sweetness and improves shelf life
Milk Drinks	Controls sweetness, provides easily digestible carbohydrates
Food and Beverage Powders	Sweetener, bulking agent, dispersing aid
Dressings and Condiments	Enhance flavors
Instant Teas	Flavor enhancer and bulking agent
Vending Powders	Ensures rapid dispensing
Meat Curing	Facilitates salt entry, enhance flavor and color
Fermented Meat	Provides carbohydrate source during fermentation
Fish Products and Marinades	Enhances flavor and prolongs shelf life

Safety

Dextrose is recognized as safe for use in food by all major national and international food regulatory agencies.



Form/Granulation/Particle Size

Dextrose is recognized as safe for use in food by all major national and international food regulatory agencies.

Packaging

Dextrose anhydrous and dextrose monohydrate are available in 25 Kg poly-lined bag or craft paper packaging. Other packaging is also available upon request.

Handling and Storage

Dextrose anhydrous and dextrose monohydrate are available in 25 Kg poly-lined bag or craft paper packaging. Other packaging is also available upon request.



Korea Office:

2F KP B/D 43-19 Yokchon-Dong
Eunpyoung-Gu, Seoul, Korea
Tel. No: +82-2-3824111
Fax. No: +82-2-3824157
Mobile No: +82-11-710-4111
Email: korea@w-goodway.com

China Office:

1-1-1203 Leader Garden,
16 Fuzhou Road, Qingdao, China
Tel. No: +86-532-85971000
Fax. No: +86-532-85770047
Mobile. No: +86-139-6486-100
Email: china@w-goodway.com

Philippine Office:

Unit 10B Belvedere Tower,
San Miguel Ave., Ortigas Center,
Pasig City, Philippines 1605
Tel. No: +63-2-633-4100
Fax. No: +63-2-637-1797
Mobile. No: +63-917-521-4111
Email: philippines@w-goodway.com