



**Nordic Sugar**  
Member of Nordzucker Group

# A world of sugar

Products and ideas for the food industry





## The possibilities of sugar

Sugar is a natural product, and its pure, sweet taste is the standard for all sweeteners. Sugar's main function is to provide sweetness and energy, but it also has a number of other functional properties. It can be used for purposes such as flavour enhancement, preservation, providing body and texture, and freezing point reduction. Areas of application range from confectionery, ice cream and baked goods to beverages and fermentation.

### Products with added value

Nordic Sugar is one of Europe's leading sugar producers, with a broad range of products for the food industry. Our sugar is produced mainly from sugar beet, although some also comes from sugar cane. The most common industrial products are granulated sugar, liquid sugar, syrup, icing sugar, nib sugar and brown sugar. This range has been developed to meet the market's needs, and now also includes a number of customer specific products, semi-manufactured products and mixtures. It is our aim to offer added value in the form of service, logistics, technical support and assistance in product development.

### Collaboration with customers

Many customers turn to Nordic Sugar at an early stage in their product development. We have unique knowledge of the way sugar behaves in various processes, and have the capacity to develop special products that meet customers' specific needs. We can also take over a part of the process by adding ingredients to the base products, delivering finished mixtures or adapting the dry substance content in liquid products. For example, demand for liquid brown sugar has resulted in a new product that is easier to transport, pump and store than previous products.

### New functions

To improve product properties we work with sensory panels and experts, such as bakers and confectionery specialists. In recent years this has led to the creation of several new products. One example is Decoration Icing Sugar: By adding a touch of starch and fat to Icing Sugar,

we have developed a product that tolerates both moisture and cold temperatures. Another exciting product is Instant Sugar, a porous sugar that dissolves quickly in cold water, making it ideal for machines that dispense cold beverages. Its porous structure also means that it can be used in tablets without the need for any other binding agents.

### Know-how and trends

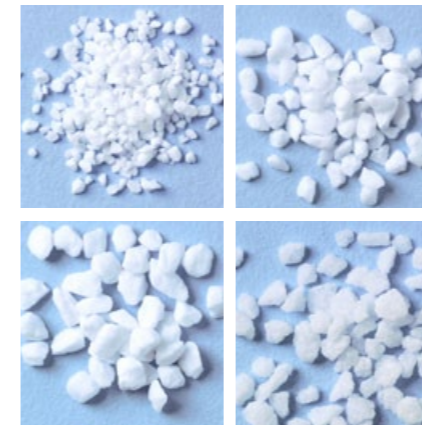
In our pan-Nordic development group we have our own food experts, sensory laboratory, and laboratories for application testing within confectionery, baking, soft drinks, etc. We also utilise Nordic Sugar's laboratories for process technology and microbiology. We are seeing a number of clear trends in the development work.

Sugar offers many possibilities – and know-how is just as important as raw materials.



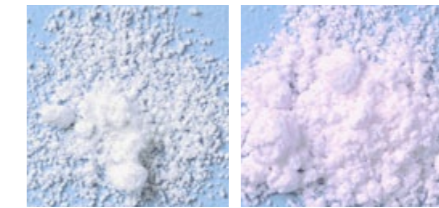
# Dry Sugar

Pure, crystallised sucrose, regular granulated sugar, is the best-selling sugar product. According to the international standard, sugar is divided into categories EU1, EU2 and EU3 on the basis of various quality parameters, such as colour. To meet the changing needs of the food industry, sugar is available in various grain sizes, developed for various areas of application. We also have a selection of screened sugars with specific grain sizes, and special products with unique properties and functions.



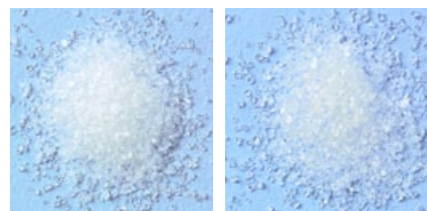
## Nib Sugar

Compressed sugar, crushed and sieved into large, white, compact particles. Various products with particle size between 1400 and 3000  $\mu\text{m}$ . There is also a crispier product with a particle size of 3000  $\mu\text{m}$ . Nib Sugar is used mainly for decorating baked goods and confectionery.



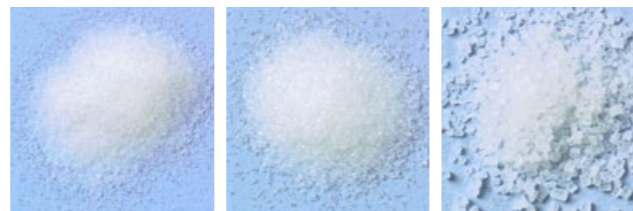
## Fondant

Extra finely ground, dry sucrose product consisting of small grains with the addition of dried glucose syrup. Only water has to be added when used. The product is available in a red and a white version. The particle size is 10  $\mu\text{m}$ . Fondant is used as icing on baked goods and as a filling in baked goods and confectionery.



## Granulated Sugar

Pure, crystallised sucrose in qualities EU1 and EU2. These products have natural particle size distribution with various average grain sizes from 500 to 750  $\mu\text{m}$ . Sold in both bulk and bags. Granulated Sugar is used in most applications. EU1 quality is often used where the purity requirements are extra high, for example in essences.



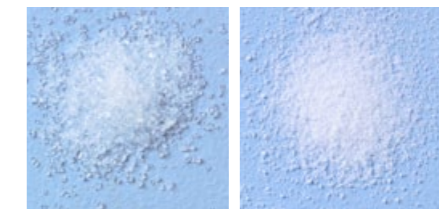
## Screened Granulated Sugar

Dry, white, sieved sugar in various grain sizes, adapted for various areas of application. In certain products fine grains and coarse grains have been sieved out, for example Screened Granulated Sugar 250-400. Other products have extra narrow particle size distribution, for example Screened Granulated Sugar EU1 390. Screened Granulated Sugar is used in dry mixtures for spices, soups, desserts and beverages, and also for surface treatment and coatings for confectionery.



## Instant Sugar

Pure sucrose that has been through a special agglomeration process to make it free-flowing, directly compressible and especially quick-dissolving even in cold liquids. Instant Sugar is used for vending machine products and mixtures, as well as in the production of tablets. There is also a pharma version of Instant Sugar.



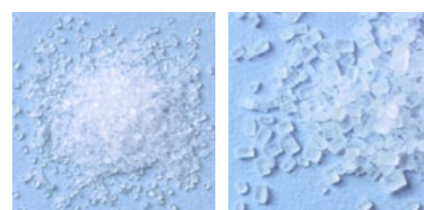
## Pharma Sugar

Pure, crystallised sucrose of EU1 quality or pure sucrose that has been through a special agglomeration process to make it free-flowing, directly compressible and especially quick-dissolving. These products meet the requirements of the European Pharmacopoeia. Pharma Sugar and Pharma Instant Sugar are used as a sweeteners in pharmaceuticals and in the production of tablets. It cannot be used for infusion solutions.



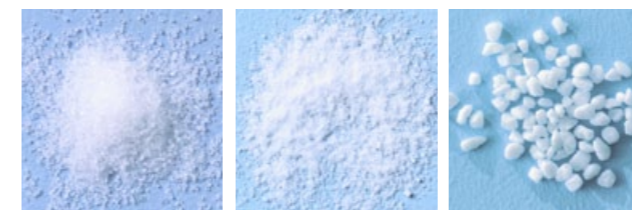
## Icing Sugar

Finely ground sugar with or without the addition of anti-caking agents such as potato starch or tricalcium phosphate (TCP). The particle size of the various products varies between 10 and 35  $\mu\text{m}$ . Icing Sugar is used mainly for decoration and the production of fillings, fondants and dry mixes.



## Coarse Grain Sugar

Pure, crystallised sucrose in large, transparent crystals. Various products with grain size is between 700 and 1500  $\mu\text{m}$ . Coarse Grain Sugar is used mainly for manufacturing and decorating baked goods and confectionery products.



## Decoration Sugar

Sugar crystals coated with vegetable fat to improve shelf-life qualities in damp or cold temperatures. Contains starch and anti-caking agents. Decoration Sugars are easy-to-use products with excellent sieving qualities. Various products with grain size between 100 and 2000  $\mu\text{m}$ . These products are mainly used to decorate baked goods.



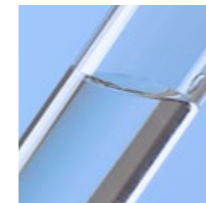
## Special Dry Products

Colour and flavour can be added to many crystal sizes according to customer preference. Examples include Black Decoration Sugar, Sugar with Cinnamon, Sugar with Cocoa and Sugar with Ammonia. Special Dry Products are used mainly for decorating and flavouring of baked goods and confectionery products.



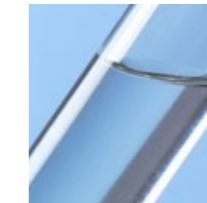
## Liquid Sugars

Liquid Sugars provide many benefits in industrial production compared to granulated sugar. In principle they act as a semi-manufactured product, as they are ready to use directly in the food manufacturing process without having to be dissolved, filtered or pasteurised. Liquid sugars are perishable goods with limited shelf-life.



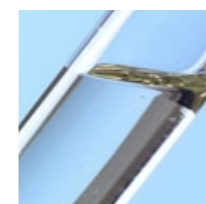
### Liquid Sugar

The most common types of Liquid Sugar consist of 65 or 67 per cent sucrose dissolved in water. The beverage industry mainly uses liquid sugars of EU1 quality that do not contain flocculents. Liquid Sugars are also used in products like jam, marmalade, fruit juice, marinades and grocery products.



### Liquid Invert

Liquid products in which the sucrose has been wholly or partly inverted through hydrolysis into glucose and fructose. The products are available with different dry substance contents. Liquid Invert is used mainly in ice cream and confectionery.



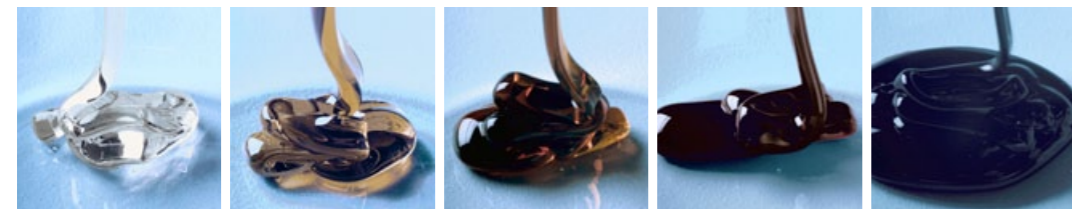
### Special Liquid Products

Special Liquid Products are available in various compositions and qualities, matched to the customer's individual applications. The products include ingredients with different functional properties, such as high-intensity sweeteners and glucose syrup. Special Liquid Products are used for such purposes as fermentation and the production of confectionery, jam and beverages.



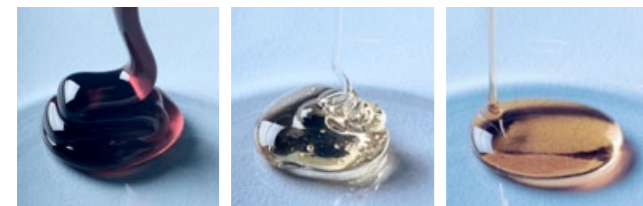
# Syrup

Syrup is a refined sugar solution where some of the sucrose is inverted to fructose and glucose, in order to give products the optimal properties. The result is a concentrated, viscous solution particularly suitable for baking. It brings out the taste and provides aroma, body and sweetness. It also makes the dough more flexible, has a positive effect on the fermentation process and keeps the end product fresher for a longer period of time. Syrup is produced in various colour and taste qualities, with each type having its specific area of application.



## Syrup

Typically an 80 per cent partly inverted solution consisting of sucrose, glucose, fructose and mineral salts. The combination of the various types of sugar prevents crystallisation. The very high sugar content guarantees a long shelf-life. Available in various colour and flavour options. Syrup is mainly used in baked goods and confectionery.



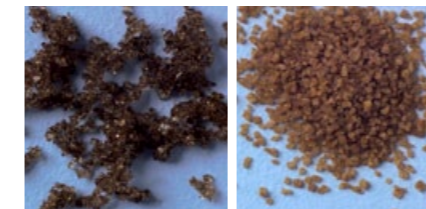
## Flavoured Syrup

Syrup is also manufactured with specific flavourings such as malt, honey and caramel. Flavoured syrup is used in products such as desserts, baked goods, marinades, sauces and dressings.



# Brown Sugar

Brown Sugar is ideal for flavouring and decorating purposes. Besides the traditional Brown Sugar we now have a range of cane sugar. What the products have in common is their aromatic, full-bodied flavour.



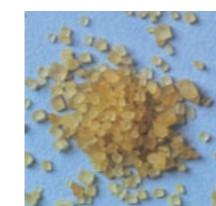
## Brown Sugar

Brown Sugar with an aromatic aroma and flavour. Brown Sugar consists of sugar and cane sugar syrup. The product is available in a moist (soft) and a dry, free-flowing version with maltodextrin as an anti-caking agent. Brown Sugar is used for adding flavour to beverages, baked goods, dressings, sauces and muesli.



## Muscovado Sugar

Aromatic and tasty cane sugar product with small grains and a moist consistency. Dark Muscovado Sugar has a liquorice-like flavour and is used mainly in baked goods, ice cream, desserts, spices, sauces, marinades and dressings.



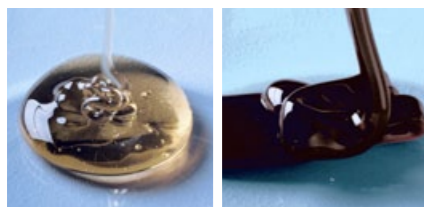
## Demerara Sugar

Cane sugar product with large grains, a golden colour and an aromatic flavour. The product serves both to add flavour and to decorate. Demerara Sugar is often used in desserts, baked goods, dressings, ice cream and sauces.



# Organic Cane Products

Organic sugar canes are grown without chemical pesticides or commercial fertilisers. The soil gets its nutrition from farmyard manure. Weeds are removed mechanically or manually. Organic Icing Sugar and our liquid organic products are manufactured on the basis of Organic Granulated Cane Sugar. The end product corresponds to regular sugar – there is no difference in taste, function or area of application.



## Organic Syrup

An 80 per cent, partly inverted solution consisting of sucrose, glucose, fructose and mineral salts. The combination of the various types of sugar prevents crystallisation. The very high sugar content guarantees a long shelf-life. Available in two types: Organic Yellow Syrup and Organic Dark Brown Syrup. Organic Syrup is used mainly in organic bread and cakes.



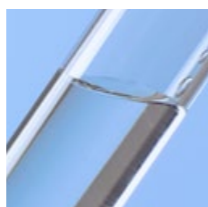
## Organic Granulated Cane Sugar

Pure, crystallised sucrose in quality EU2. Organic Granulated Cane Sugar is used in organic products.



## Organic Icing Sugar

Finely ground sugar consisting of small particles with the addition of two per cent organic potato starch as an anti-caking agent. The average particle size is 20 µm. Organic Icing Sugar is used mainly for organic baked goods.



## Organic Liquid Sugar

There are 3 types of Organic Liquid Sugars: 62, 65 and 67 per cent organic sucrose dissolved in water. Organic Liquid Sugar is used in products like jam, marmalade, fruit juice, beverages and marinades.

# Safe Sugar

Demands on food safety are tightened every year. For Nordic Sugar it is self-evident that customers and authorities must be able to trust the products supplied. We therefore track the raw material and the sugar all the way from planting, growing and harvesting to transport, sugar production, storage, packaging and delivery to the customer. From field to fork.

## Sustainability policy

Our activities are based on sustainability principles where current demands are met without jeopardising future generations' opportunities for meeting their needs. Nordic Sugar aims to conduct legally and ethically correct activities while meeting the demands of our customers and other interested parties. We have established five policy areas to help us manage risks and support our business concept:

- Quality and customer satisfaction
- Product safety
- Energy and Environment
- Health and Safety
- Business integrity and social responsibility

We will be happy to send you our sustainability policy at your request.

## Certification and management systems

Nordic Sugar actively applies management systems in the areas of quality, product safety, environment and working environment, and is certified according to the following standards:

- Quality ISO 9001
- Product safety FSSC 22000
- Environment ISO 14001
- Health and Safety DS/OHSAS 18001



