



Nordic Sugar
Member of Nordzucker Group

fibrex[®]

The functional fibre





Facts

What is Fibrex®?

Fibrex is a dietary fibre from the sugar beet fields of Southern Sweden.

The composition of the sugar beet is about 76% water, 18% sugar, and the rest, 6% is the cell walls.

After the sugar extraction, the rest of the sugar beet is transported to the Fibrex plant where the water content is dried out with overheated steam. The result is Fibrex, a natural dietary fibre with a high fibre content. 73% with a natural balance between insoluble and soluble fibre.

The factory

Located in Köpingsbro in Southern Sweden is our dedicated Fibrex plant build in 1986.

The patented method of steam treating sugar beet pulp is carried out in the 800 m tubes on the outside of the factory. The dried beet pulp is then milled to different fractions and packed, all within the factory, eliminating the risk of contamination or quality reduction.

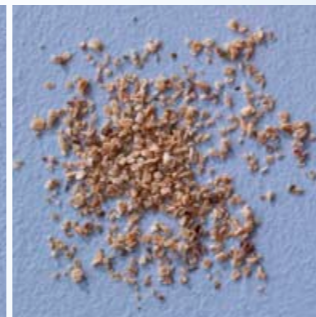
The factory is managed according to ISO 9001, 14001, 22000 and HACCP.

The product line

Fibrex is available in many different ground fractions with particles from <math><32\mu</math> to flakes.

This gives us the possibility to offer just the right fraction for your application and your needs.

All fractions are produced in the same natural way without addition of any chemicals and with the same high content of dietary fibre (73%) and water holding capacity.



Key words

Natural

Natural means no chemicals added or used after the sugar extraction from the sugar beet. The pulp is dried by overheated steam under pressure in a patented drying method that optimises temperature, pressure and time to minimise taste and odour in the end product.

We believe in the natural beige or off-white colour in our product as a more natural and safer image. That means that we have abstained from bleaching the product with chlorine or hydrogen peroxide with whatever risk this could mean in terms of residual radicals or peroxides.

Concentrated

Fibrex consists of 73% dietary fibre, 10% protein, 5.5% sugar, 4% mineral substances and 0.5% fat. This means – for a natural fibre – high concentration of dietary fibre in the end product.

Dietary fibre

Today's intensive discussion about dietary fibre started at the end of the 1960-ies when Dr. Burkitt from England had been to South Africa to study the eating habits and the diseases among the natives there. He found that they rarely suffered from the so called Western world diseases, like high blood pressure, coronary heart disease, cardiovascular problems in general, diabetes, constipation, diverticulosis, colon cancer etc. One of his conclusions was that this was directly related to their eating habits – they ate a lot more dietary fibre, (both soluble and insoluble.)

Soluble and insoluble fibre

When dieticians or physicians talk about fibre enrichment of food products, such enrichment should be made in such a way that it does not change the "natural" balance between soluble and insoluble fibre that humans would "normally" consume. Going back to our forefathers they, allegedly, would eat a balance of 2/3 of insoluble fibre (coming mainly from cereals and root vegetables) and 1/3 of soluble fibre (coming from fruits, vegetables and root vegetables).

A change towards too much of only insoluble fibre (that are merely functioning as laxatives) is not desirable. It has to be remembered, that it is only soluble fibre that is nutritionally "active" in terms of influence on cholesterol, blood sugar etc.

This statement from dieticians and physicians was one of the reasons for Danisco Sugar AB to go into the Fibrex project in the late 1970 with the aim to upgrade the use of beet pulp from cattle feed to a dietary fibre for human consumption.

We were pioneers in this field.

Unique water holding capacity

The cell structure of the sugar beet is unique. Each cell is "opened up" just enough to extract the sugar (and molasses) content but not to extract the approx. 22% pectin contained in the cell walls. This "emptied" cell structure is dried by clean steam and shrinks together.

When this dried particle is soaked in water, the water will "stiffen up" the cell structure again. Water will be soaked into the empty cells, where it will gel with the pectin creating a cell structure with small water "depots" surrounded by cell walls.

This describes the unique water holding capacity (WHC) of Fibrex. Fibrex used e.g. in bakery products binds 3.5 times its own weight of extra water in the dough/bread with unchanged water activity in the product (even during baking and freezing).

Fibrex retains that extra water also in the end product.

Gluten free

Fibrex is by nature free from gluten, which means that it is an excellent dietary fibre source for people suffering from celiac disease ("gluten intolerance").

Phytic acid

Phytic acid, normally contained in e.g. cereal products (like bran and flour) will form very strong chemical complexes with iron and zinc and consequently impair or reduce the natural absorption of these essential minerals in the human body.

Fibrex contains no phytic acid.



A safe and natural source of fibre



In the bakeries

FibreX, the natural fibre in the bakery, prolongs the shelf life of your bread and will keep your frozen dough from drying out. FibreX will work for you during the whole baking process – in the easiest way possible.

Convenience food and meat applications

As an ingredient in different types of ready meals and minced meat products, FibreX offers a natural way of keeping juiciness, achieving a nice chewiness and a better yield. FibreX is offered in a number of milled fractions for the use in a variety of products.

Health products

FibreX high fibre content and unique composition of soluble and insoluble fibre makes it a natural choice when it comes to fibre intake. FibreX is suitable for tablets, granola bars, fibre enrichment of müsli and other health related products.

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