

BiTex®
Functional
Flour

BINDING NATURE TO TEXTURE

Texture knowledge, a unique texture language for savoury snacks, extensive application knowledge and understanding of consumer preference: all this makes Unicorn Grain Specialties the perfect partner for your product development.

SOFTNESS
DRYNESS
POLISHINESS



Savoury Snacks

- Snack Pellets
- Sheeted Tortillas
- Direct Expanded

(Fine) Bakery

- Choux
- Cake
- Bread

Batters & Coatings

Understanding texture

Unicorn Grain Specialties is your specialist in the field of texture. We monitor the consumers of tomorrow. We understand the preferences of your consumers and know how to translate them into the right texture. Unicorn has developed a unique texture language that perfectly describes different textures. This is the first of its kind.



Our texture profiles help you to classify characteristics

We have identified and developed 22 unique texture profiles. Each descriptor has its own textural property, such as the descriptors 'crispiness', 'airiness' and 'meltability'. The targeted use of these properties in the right dosage provides a unique taste experience. It allows us to guarantee tailor-made ingredients for each client and each product in the markets of savoury snacks and (fine) bakery.

The right experience in taste, touch and feel, right from the very start

Once the desired taste experience has been mapped out, our experts can – through the addition of the appropriate BiTex® Functional Flour – create this experience quickly and precisely for you, in a fully customised manner. We speed up your development process and save considerably on costs. This allows you to engage and surprise the consumer, and gives you a winning hand.

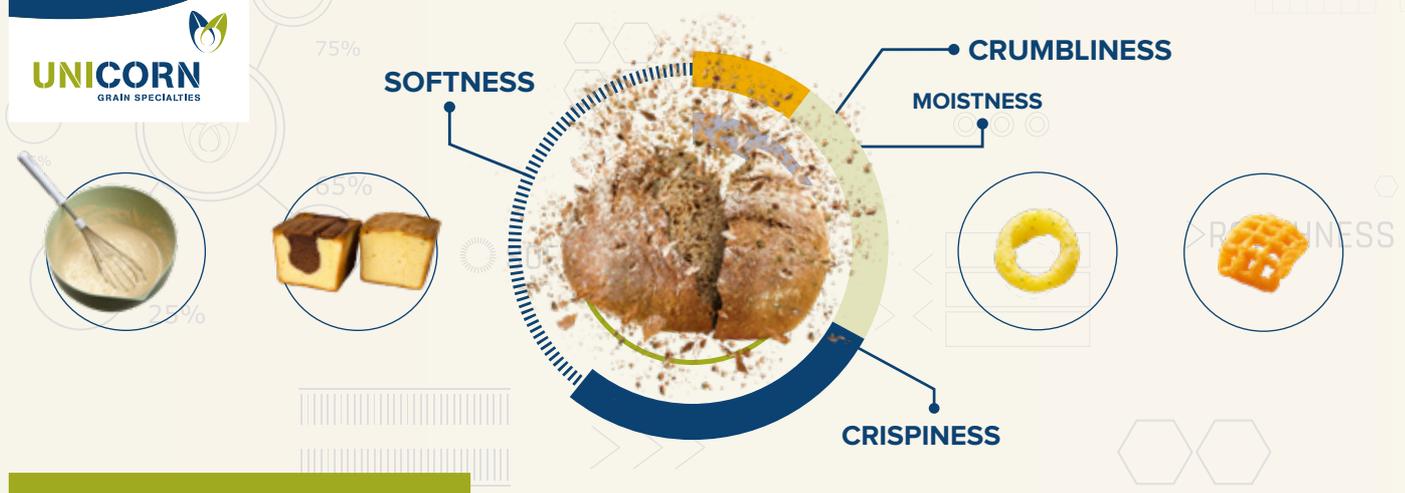
BiTex[®] Functional Flour

We at Unicorn Grain Specialties understand, live and breathe texture. We have defined unique texture descriptors allowing us to identify and create successful texture profiles. We know exactly how to apply our functional flours to give your application the discriminating and consumer winning texture. This innovative ability to “customise texture” deserves its own name: BiTex[®] Functional Flour.

The BiTex[®] portfolio contains a rich variety of functional flours prepared from natural ingredients such as grains, seeds and pulses.



BiTex[®] Functional Flour makes Unicorn Grain Specialties the number one **texture specialist**



Batters & Coatings

The demand for convenience food products is rising. This includes crispy snacks based on meat, fish, cheese, vegetables and potatoes. Due to increasing diversity, manufacturers and producers of batter mixes are searching for high quality ingredients to control binding, viscosity and water absorption. Unicorn Grain Specialties has developed BiTex[®] Texturizers that give a specific functionality to the various batters. Unicorn's Texturizers give perfect control over these parameters.



Types of batters

A batter is a liquid mix products are dipped into, before a layer of (bread)crumbs is possibly applied. There are three types of batters:

- 1. Clear coatings** are diluted batters that are invisible on the substrate after preparation. They are applied to frozen products, such as French fries and potato wedges, to enhance crispiness and also often act as a carrier for spices and other ingredients.
- 2. Tempura batters** are the outer layer of the end product. The tempura layer is fixed around the product by deep frying or cooking in the oven.
- 3. Adhesion batters** create a binding layer between the substrate and, typically, a breadcrumb layer. They must adhere well to the substrate and ensure that the breadcrumbs remain attached to the product.

Savoury Snacks

Unicorn Grain Specialties, the expert in texture, is introducing new functional flour in its BiTex® range for savoury snacks. The BiTex® range of all natural functional flour is based on grains, seeds and pulses and come in different granulations with very narrow particle size distributions.

Snack Pellets

Unicorn Grain Specialties has developed a range of functional ingredients based on a number of selected hydrothermal treated cereal flours. In traditional formulations for on snack pellets the Unicorn BiTex® range gives the possibility to have control over texture development, cost efficiency and end-product quality.

Application

By adjusting the formulation and replacing the potato flakes and granules by functional flour, there will be a positive impact on the texture of the snack. The resulting snacks will be low in acrylamide as the BiTex® range doesn't contain any chemical precursors for acrylamide formation.



Sheeted Tortillas

The Tex-Mex cuisine has been growing widely in popularity over the past decade. Tortilla chips are the reference for consumers in this respect. Unicorn Grain Specialties developed a tailored product for this market where taste, texture and functionality are of high importance. BiTex® FF 12501 is defined as a highly suitable product in tortilla chip production.

Application

Tortilla chips are produced by making a dough based on masa (nixtamalised corn flour) followed by sheeting, shaping and frying. A good flexible and elastic sheet is desired and ingredients should be tasty and deliver a good texture. BiTex® FF 12501 is produced from selected non-GMO corn and processed into an instant flour, which provides the desired characteristics in a natural way.

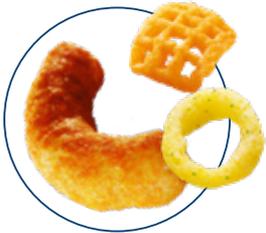


Direct Expanded

Direct Expanded snacks are made by high shear cooking extrusion, followed by coating with vegetable oil and flavours. They are available in many shapes, colours, and flavours and based on a wide range of raw materials, mainly cereals. Maize semolina is highly suitable for the production of direct expanded snacks. Potato flakes and sometimes modified starches are used for the adjustment of texture and creating a potato flavour. Unicorn offers functional wheat-, rice and maize flour, which can be used as an alternative.

Application

To be able to have control over the pore size and mouthfeel the raw materials have to be standardised. The final product should be soluble in the mouth without stickiness. To have more control concerning texture and structure Unicorn Grain Specialties offers a range of products based on different cereal flours that have been hydrothermally treated in various ways. An additional advantage of the use of BiTex® Functional Flour is that this will result in an increased production capacity.



(Fine) Bakery

The extensive BiTex® range is also very suitable in the use of (fine) bakery products. The natural flours are based on grains, seeds and pulses and come in different granulations. We at Unicorn Grain Specialties are experts in texture and like to develop tailor made solutions for our clients.



Choux

French pastry products are consumed all over the world. Éclairs are a favourite with lots of people, typically topped with chocolate and filled with cream. Traditionally these products pastries are made by cooking flour in butter followed by the addition of whole egg. The resulting batter is then baked into the desired shape. The cooking step is sensitive in processing. This can be avoided by the application of a precisely selected choice of precooked cereal flour.

For the baker's convenience instant flour mixes have been developed. The latest development of Unicorn Grain Specialties is a fully optimised instant flour named BiTex® 11902.

The cooking step has been removed; BiTex® 11902 can be blended with butter or shortening and egg. A choice of leavening agents can be added to achieve the desired volume.

The resulting choux pastry has a good volume, fleshy texture and shiny appearance.

Application

Choux pastry should have a hollow structure within a light thin crust enabling the product to be filled with whipped cream and other fillings. If making éclairs they should have a short bite and texture, a good volume and a shiny surface.

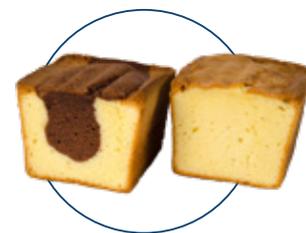
Cake

Pound cake refers to a type of cake traditionally made with a pound of each of four ingredients: flour, butter, eggs and sugar. Pound cakes are generally baked in a loaf pan and served either dusted with icing sugar, enrobed in chocolate or glazed. There are numerous variations of the traditional pound cake with additional ingredients like flavours, leavening agents and fillings.

Application

BiTex® 11501 functional flour is used in pound cake recipes in order to achieve an increased softness in combination with an extended freshness. The crumb structure will be more tender and moist.

By the increase of the dough viscosity the bearing power of fillings increases as well.



Bread

Depending on shape, process and application, bread is consumed in different variations around the globe. From crispy to soft, from rough to tender, bread is eaten with various demands and requirements. Staling is a well known issue deteriorating the texture of bread caused by retrogradation. The use of BiTex® 11501 postpones the retrogradation resulting in a longer freshness and increases bread production yields whilst improving the Texture Characteristics such as crispiness, bite, and mouthfeel.

Application

In order to obtain better dough and bread characteristics a number of ingredients could be used. Besides the standard components and your micro ingredients such as; enzymes, emulsifiers and hydrocolloids, BiTex® 11501 can be used. BiTex® 11501 is an functional wheat flour without additives or chemical modifications and is declared as regular wheat flour, so clean labelling without any issues.



**NATURAL FUNCTIONAL
INGREDIENTS**

**FOR A HEALTHY AND MORE
SUSTAINABLE WORLD**

At Unicorn Grain Specialties, we enhance the functional qualities that grains, seeds and pulses have to offer. We are the specialist in processing these natural raw materials into versatile applications. Unicorn works cooperatively in the food chain creating healthy ingredients. Our ingredients feed more than 150 million individuals worldwide. In doing so, Unicorn contributes to producing sustainable and healthy food. For more than 100 years we have been working passionately at creating a healthy and better food experience.



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