

Indian all-time favourites re-invented.
High fibre, sugar-reduced flavoured milk.

Over the years, India has witnessed an alarming increase in the prevalence of lifestyle diseases like diabetes and obesity. To counter this trend, why not re-invent some of our all-time favourite beverages and desserts like lassi, mishti doi, drinkable yoghurt or flavoured milk,...?

Recognising its responsibility, the industries developers look into reducing sugar and fat content in these beloved dairy products, and aim to find solutions for the technical challenges before them: maintain taste, texture, and overall consumer satisfaction. On top, these dairy drinks manufacturers can develop their recipes with additional functional benefits to enrich their beverages with e.g. fibres, prebiotics, probiotics etc. to further cater to the health conscious consumer.

Our Food engineers from the BENEO-Technology Center are happy to share their findings for this heathier flavoured milk with you.



HIGH FIBRE



LOW FAT
REDUCED FAT



REDUCED SUGARS

Flavoured Milk

INGREDIENTS (% w/w)	BENEO recipe	Market reference
Liquid milk	92	93
Sugar	5	7
Orafti® Inulin	3	-
Minor ingredients (e.g. flavour)	q.s.	q.s.

A simple process to make this healthier flavoured milk drink.

1. Heat the milk to 50-55°C and in parallel dry blend sugar and inulin powders.
2. Disperse the dry blend of sugar & inulin into milk and mix for 15 min with the help of high speed Silverson mixer.
3. Add the flavouring of your choice and mix well.
4. Heat the milk mix at 65°C in a plate heat exchanger and homogenise at 150/50 bar.
6. Fill the mix into retort stable PET bottles and store them at 5°C and transfer them to retort site.
6. Retort the filled bottles at 121°C for 15 min.

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No formulation challenges when reducing 30% sugar and 50% fat.

Maintaining the taste profile.

Without a doubt, the primary role of sugar in these flavoured milk drinks is the enhancement of the overall flavour profile with its sweet taste. Reducing the sugar content without compromising taste is a significant challenge. Alternative sweeteners or sugar substitutes have different taste profiles and can affect the overall sensory experience of the drink. BENEO's alternative recipe with Orafti® Inulin offers a combination of mildly sweet fibres and a matching flavour blend to counter that risk.

Texture and mouthfeel.

Sugar, and even more so fat, add body and texture to flavoured beverages; where fat of course brings the desired smooth sensation on the tongue, known from dairy products. Reducing both sugar and fat can result in a thinner or a somewhat watery texture and a less creamy mouthfeel, impacting on the overall quality experience. With BENEO's chicory root fibres, like Orafti® Inulin, we offer a suitable replacement to mimic the desired texture, which does not require you to modify your processing techniques.

Emulsion and homogeneity.

Certainly fat, but also sugar can contribute to the stability and emulsion properties of certain dairy drinks. To reduce the fat and/or sugar content without a counter balance may lead to issues with emulsion stability, resulting in phase separation or undesirable changes in appearance and texture. This recipe of flavoured milk is low in fat, yet still delivers strong on putting a homogenous product on shelf. Try it out!

Nutritional information:

Typical values per 100 ml	BENEO recipe	Reference recipe
Energy (kJ/kcal)	297/71	347/83
Fat (g)	1.4	2.8
of which saturates (g)	0.9	1.7
Carbohydrate (g)	10.8	11.8
of which sugars (g)	5.1	7.4
Fibre (g)	2.1	0.0
Protein (g)	2.9	2.9
Salt (g)	0.0	0.0

The mentioned nutrition information applies the energy conversion factors as laid down in EU legislation.



High fibre claim – supporting digestive health.

A good digestion is vital for a healthy life. It helps our body to absorb all the nutrients it needs to run smoothly. A key element to achieve a healthy digestive system is sufficient intake of the right dietary fibre. Generally, consumers don't eat enough fibres, but reaching the recommended doses with basics such as fruit, vegetables and wholegrain alone is an almost impossible task. By simply adding Orafti® Inulin into their daily flavoured milk for example, their fibre intake can be easily increased. The scientific database for BENEO's prebiotic chicory root fibre is the strongest in the food industry, confirming their efficacy in supporting digestive health, including the support of our inner defence, leading the market for more than 40 years.

BENEO has long-term experience in developing and producing functional ingredients from natural sources. We employ over 1000 people and market our products in +80 countries. Through a unique chain of expertise, we offer our customers the basis for new product ideas and successful product launches. Our state-of-the-art production sites around the world ensure high quality ingredients at all time.

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www.beneo.com

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