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Remypure, functional clean label rice starch. Texture & stability in a natural way.

Naturalness and transparency are key for today's consumers, who are increasingly concerned about what goes into their food, as well as how it is made. When reading labels, shoppers are looking for specific cues to help them find products that meet their needs, and many are seeking "natural" attributes. Packaging statements such as "no artificial ingredients", "no preservatives" and "contains only natural ingredients" get high scores on the shopper's wish list, equally to core drivers such as nutrition and taste (>60%).¹⁾ Yoghurt and dessert producers have looked into bringing such statements on the product label, with more than one in four dairy innovations of last year featuring a natural claim of some kind.²⁾

In the context of this growing demand for functional natural ingredients, BENEО has developed a new technology to enhance the functional properties of native (clean label) rice starch. Thanks to this process, native rice starch achieves performance levels comparable to chemically modified food starches without using any chemicals.

The combination of rice origin and this new technology gives food manufacturers the opportunity to **create unique textures and excellent product stability** under harsh processing conditions (low pH, high temperature, high shear) whilst **solely using clean label rice starch**, without the need to go for other label-unfriendly functional ingredients (e.g. additives such as modified food starches and gums).

Rice-based starches are unique compared to other commonly used starches in the food industry: neutral **taste, white colour**, very **small** and uniform starch **granule size** (2-8µm), creation of **soft gel** structures and **creamy & smooth textures**. The latter features are related to the unique molecular differences of rice starch (versus other food starches) at the level of amylose (being branched) and amylopectin (lower tendency towards retrogradation).

¹⁾ HealthFocus International - Study "Clean And Green Around The World", 2015

²⁾ Mintel GNPD, 2015

Stable fruit preparations with delicate textures.

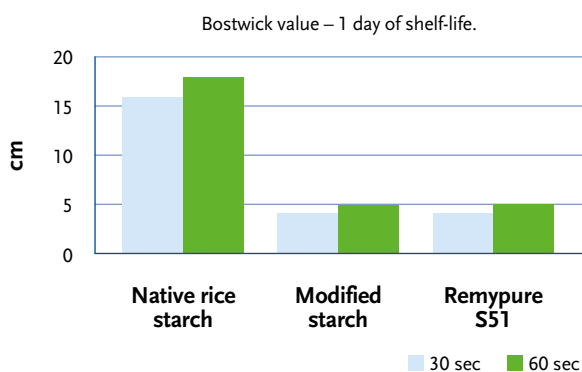
Food starches are commonly used thickeners in fruit preparations, which are definitely amongst the most challenging food applications due to the low pH, high shear and temperature conditions during processing. A stable fruit preparation with excellent texture can be obtained with Rempure S51, thus avoiding the use of chemically modified food starches.

Extensive lab tests show an improved functionality of Rempure S51 versus an alternative native rice starch: improved viscosity build-up is clearly reflected in significantly lower Bostwick values (see Fig.2). Moreover the performance of our functional clean label rice starch is comparable to modified food starches designed for these type of applications; yet Rempure S51 offers such performance as well as a “clean label” and “natural” option.

Fig. 1: Dairy fruit preparation.

Ingredient	% w/w
Strawberry	50.00
Water	22.62
Sugar	22.00
Rempure S51	5.00
Citric acid	0.30
Sodium citrate	0.08

Fig. 2: Impact of Rempure S51 on stability and viscosity build-up.



Furthermore, the waxy rice origin of Rempure S51 provides excellent stability to the fruit preparation during longer storage periods.

Value proposition with Rempure:

- **Natural** status
- **Clean label** status
- **High tolerance** towards low pH, high temperatures and high shear
- **High product stability** (shelf-life, freeze-thaw) thanks to the rice origin
- **Unique textures**
- **Neutral** taste

BENEO's Technology Center has researched the performance of this functional clean label rice starch Rempure S51 in a variety of dairy and fruit preparation formulations. Our experts are keen to share their insights upon request.

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