

Improving The Taste Of Reduced-Sugar Beverages



Sugar reduction in sugar-sweetened beverages has been singled out for reformulation even before the COVID-19 pandemic⁶. Today's consumers are staying sweet on products with reduced or no-added-sugar claims but they are unwilling to sacrifice sweetness, mouthfeel, and taste – the technical benefits that sugar often delivers¹.

FMCG Gurus insights show that 72% of consumers believe that natural sweeteners are a healthier alternative to sugar⁴. Natural sweeteners seem to be the go-to choice now – as long as they can meet or exceed expectations for taste¹.

The Stars: Stevia and Monk Fruit

Stevia continues to be the star among natural sweeteners, but up-and-coming ingredients like monk fruit are also catering to the growing consumer demand for sugar alternatives. A report by Tate & Lyle suggests that 42% of consumers are aware of stevia and 29% would be likely or very likely to purchase a product with stevia¹. Both stevia and monk

fruit extract are intensely sweet with up to 300 times sweeter than sucrose – but it has no carbs and calories thus becoming a boon for calorie-conscious consumers^{7,11}.

Getting The Right Sweetener Blend

A blend of several sweeteners is commonly used to achieve higher sweetness intensity, improve sensorial characteristics, and even optimise formulation's costs for reduced sugar beverages⁹. Blending high-intensity sweeteners (HIS) like stevia and monk fruit with other sweeteners is a way to balance off-notes. With the presence of other bulk sweeteners, food manufacturers can re-build the food volume that is otherwise lost with HIS⁵.

The low-calorie sugar alcohol erythritol is very commonly paired with stevia and monk fruit because of its ideal sugar-like taste as well as its easy digestibility⁵. Furthermore, erythritol has similar or better wettability than commercialised bulking agents and does not create variation in sensory perceptions¹⁰. Isomalt is another choice of bulking agent used in sugar-free products that resembles the taste of sugar⁸. As a bulk sweetener, it can replace mouthfeel which is lost with sugar reduction. Depending on the application, it may also be necessary to adjust starch levels, hydrocolloids and other texturants to more closely replicate the body of a full-sugar beverage².

There has also been a study evaluating the sensory acceptance of soymilk powder containing different combinations of three sweeteners which are stevia, erythritol and isomalt. Most of the different combinations of the sweeteners produced an average to good score, whereas the sample with an 80% level of Stevia and a ratio of 75:25 erythritol to isomalt for the remaining 20% had the highest score in terms of the characteristics of sweetness, sweetness post-taste, texture and overall acceptance⁸.

Consumers Prioritise Taste

Led by the snowballing consumer's desire for reduced sugar and calorie products with a more realistic sugar taste, the quest for low or no-calorie sweeteners is expected to continue. Although consumers have shown considerable interest for natural sweeteners as part of a growing trend in health and wellness, compromising on taste and quality is unlikely³. At DPO International, we are honoured to be in partnership with **Beneo-Palatinit** and **Monk Fruit Corp.** to bring you a wide selection of ingredients that will elevate the nutritional quality of your food and beverage products.

References

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¹⁰Tasso, I., Santos, T., & Seibel, N. (2020). Elaboration of a natural sweetener using Erythritol/Stevia. *Food Science And Technology*, 40(2), 370-375. <https://doi.org/10.1590/fst.42718>

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