

Clean Label Sugar Reduction in Bars

Not too long ago, bars made from granola, corn syrup, nuts, and fruit were considered the ultimate healthy food. However, that changed as consumers knowledge of nutrition grew. Today's consumers are demanding clean label food ingredients that provide substantial health benefits, so formulators are incorporating exotic grains, omega-3 rich seeds, probiotics and prebiotics, protein, fiber, vitamins, minerals, and energy-boosting ingredients—all of which must be sweetened and bound together naturally while reducing sugar.



Corn syrup—the go-to ingredient of the past—is no longer acceptable in foods bearing natural claims. General Mills' Nature Valley brand, makers of the first granola bar introduced in 1975, settled a class-action lawsuit initiated by the Center for Science in the Public Interest. In documents filed in the U.S. District Court for the Northern District of California (case number

3:12-cv-03919), the plaintiffs accused the company of deceptive marketing of its granola bars and thins as natural when, “they contain or contained, substantial quantities of non-natural, highly processed ingredients, such as HFCS (high fructose corn syrup)” (2).

According to Innova Market Insights, clean labeling and natural processing are the top food trends in 2022, and so is consumers' desire to avoid sugar (3). This is supported by the NPD Group's study, which showed that sugar is the primary ingredient consumers are trying to cut out of their diets (1). However, avoiding sugar and corn syrup presents a conundrum for manufacturers—often they are the glue that holds bars together. As developers add more nutritionally and texturally rich ingredients to the mix, stability is challenged.

That glue—in the form of binding syrups and gums—also provides humectancy (i.e., they help the bar stay moist over its shelf life). This is especially important for higher protein bars because water tends to migrate to these protein ingredients from the syrups. Water activity (aw) is also critical to food safety. An aw of less than 0.65 is generally acceptable. The choice of sugar and the final moisture of the binding syrup determine the bar texture. For example, allulose reduces aw and leads to a softer bar. Producers looking for label-friendly binding syrups can use ingredients like allulose, soluble tapioca



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fiber and FOS. Clean label gums—like gum arabic—can be used to add soluble dietary fiber, which is included in the total measure on the nutritional facts panel.

Other natural sweetening agents have a wide range of benefits.

- Stevia is a zero-calorie sweetener derived from the South American plant *Stevia rebaudiana*. Because it is 200 to 300 times as sweet as sugar, a very small amount is required. *Rebaudiana*—commonly known as candyleaf, sweetleaf, or sugarleaf—has no after taste. When combined with other sweeteners, stevia acts synchronistically, bringing out their best qualities while using lesser quantities of each. Stevia’s compatibility with allulose and erythritol enhances fruit flavors, and it works well with tea and mint—two flavors that are making their way into bars.
- Originally used in traditional Chinese medicine, monk fruit has often been used to treat diabetes—with the extract around 150-200 times sweeter than sugar. Monk fruit is a small, round fruit grown in Southeast Asia—also known as *Lo Han Guo*—that has been cultivated for more than 200 years. Because monk fruit is able to stimulate insulin without raising glucose, it effectively lowers overall blood glucose levels, rather than increasing levels like some other sweeteners. It is a natural flavor enhancer that helps mask “off” flavors from fortifying ingredients, such as minerals and vitamins.

As consumers look to increase their nutritional intake from natural sources, food developers are looking for assurance that the ingredients they buy are minimally processed. At Icon Foods, we have dedicated ourselves to supplying products that are derived via fermentation or natural water and vegetable-alcohol extractions. Stevia extracts are uniquely water-extracted. It is a process that consumers understand, and it offers exceptionally clean flavor with no petrochemical residue. Most of Icon Foods’ products are certified GMO free and Kosher. We offer a variety of sweetener blends, including combinations of stevia, allulose, monk fruit, erythritol, and a selection of prebiotic fibers. This gives developers a single, easy-to-use ingredient for sweeteners—with the added benefit of ingredient consistency in the manufacturing process.

Our dedicated research and development team also offers custom sweetening solutions. Any sweetening blend can be combined with other sweeteners to create matchless sweetness profiles for reduced sugar and zero added sugar bars. Unexpected synergies may enhance flavor and even allow for reduction of costly ingredients. Protein bar developers are facing challenges to deliver bars



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that meet taste and texture expectations, while also including a myriad of nutritional and textural enhancements. With Icon Foods as your Clean Label Sugar Reduction Partner, abandoning corn syrup in favor of clean label sweeteners can be the least difficult step on the path toward customer approval!

About

Icon Foods works with food manufacturers to create plug-in, custom sweetening systems in a variety of particle sizes that function as a replacement for sucrose, 10x sugar, invert sugar, and high fructose corn syrup. When you partner with Icon Foods you can be assured that you will receive natural, clean label, non-GMO products that are produced through chemical-free processing—our food ingredients are gluten-free, diabetic safe, and kosher as well.

Icon Foods has an extensive system in place for ensuring the highest possible standards for quality control and food safety, such as stringent ingredient oversight, adherence to good manufacturing practices with strict microbiological standards, and ongoing heavy metal and pesticide testing.

For spec sheets, documentation, and samples of our Clean Label Sugar Reduction products, call your Icon Foods sales representative at 310-455-9876 or email sales@iconfoods.com

Sources

1. Chojnacki, Robert. “Consumers Are More Concerned with Sugar Than Sodium Intake.” *The NPD Group*, 20 Oct. 2021, <https://www.npd.com/news/press-releases/2021/u-s-consumers-are-more-concerned-with-sugar-in-their-diet-than-they-are-sodium/>.
2. “Defining ‘Natural’: Class Actions Against Food Labels.” *ClassAction.org*, 5 Oct. 2017, <https://www.classaction.org/natural-foods>.
3. “‘Shared Planet’ Leads Innova Market Insights’ Top Ten Trends for 2022.” *Innova Market Insights*, 13 Oct. 2021, <https://www.innovamarketinsights.com/press-release/shared-planet-leads-innova-market-insights-top-ten-trends-for-2022/>.