



FORMULATING FOR CONSUMER DIET TRENDS IN FROZEN DESSERTS

By Darshan Purohit, Sr. Scientist



Ice cream has been an indulgent treat for many consumers; however, due to the rise in diet trends, such as Keto, partnered with a strong desire to make healthier choices, traditional ice cream and frozen dessert products may struggle to find a place in the modern consumer diet. Ice cream manufacturers must adapt to these trends if they want to stay relevant with consumers, but for me, this is an exciting part of my job, as I can help formulators overcome challenges with reducing sugar, calories, or carbohydrates and with the additional of nutritional benefits. Sugar reduction or replacement is a trending theme for formulators looking to adapt. Sugar comprises about 45% of solids in a traditional ice cream formulation, providing three main functions:



1

Provide
Sweetness

2

Provide solids/bulk
which impacts
viscosity and body

3

Depress the
freezing point for
easy scooping

One of my go to ingredients right now is our DOLCIA PRIMA® Allulose, which is a rare sugar found in nature and provides only 0.4 kcal per gram versus 4 kcal per gram for sugar/sucrose. Allulose is not counted as part of added sugars or total sugars and is permitted to be used in no sugar added products. It also depresses freezing point about twice as much as sugar. Currently, It is permitted in the U.S to be used at the maximum usage rate of 5.0% by weight in ice cream and frozen desserts category. One of the reasons I love working with this ingredient is that it helps replace all three functionalities of sucrose in ice cream, and it is well suited to this category where some products are marketed based on calories per container.

For Keto products, low net carbs are the key, and carbohydrates coming from allulose are subtracted 1:1 from total carbs to get to net carbs, meaning formulators can reap the benefits of allulose in keto-friendly or reduced carb formulations. Tate & Lyle provides both dry and liquid allulose, however liquid allulose would be beneficial to use in ice cream application since it can easily replace liquid sugar which is typically used in ice cream manufacturing. Dolcia Prima liquid allulose can be stored at room temperature and is easily pumpable at room temperature.

Another favorite ingredient of mine is our PROMITOR® Soluble Corn Fiber. It may sound surprising to use fiber in an indulgent category, but the benefits are substantial. While it does not provide sweetness, soluble corn fiber does provide bulking and supports viscosity and mouthfeel. Our PROMITOR® range offers different fiber levels, ranging from 70 to 90%. These products do not build excess viscosity and can easily be used up to 10% of the formulation.

A key trend in ice cream has been to improve the nutrition fact panel through the addition of protein or fiber. Additional protein in an ice cream product can make it too hard to scoop and impact the texture of the product.



High Protein + low sugar can lead to shrinkage and poor texture

One of our newer fibers, PROMITOR® 90B, was designed more so for the nutrition bar category, but myself and our dairy experts discovered that this fiber provides application benefits in ice cream, mainly producing a softer and more pliable product for easy scooping. Fiber can be a multi-faceted tool that, in my opinion, formulators should be reaching for when looking to make “better for you” frozen desserts. For example, our PROMITOR® line not only offers clean taste and neutral color but also supports gut and digestive health, sugar/calorie reduction, lower glycemic response, exceptional digestive tolerance, calcium absorption and even cholesterol management. With dry and liquid forms available for processing adaptability, there really is no limit to the potential of soluble corn fiber in frozen desserts.

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