

No Sugar Added Premium Ice Cream

Maltisweet® IC Maltitol Syrup



Corn Products Specialty Ingredients products for use in this application:

- MALTISWEET® IC Maltitol Syrup

	Sucrose	Maltitol
Molecular Weight	342	344
Sweetness	1	0.9
calories(kcal/g)	4	2.1
Solubility @ 22°C	67	65
Melt Point (°C)	168-170	144-152
Heat of Solution, kcal/g	-4.3	-5.5
ERH @ 20°C	84	89

What is No Sugar Added ice cream and why is it important?

All true ice cream contains some sugar due to the lactose present in the milk and cream. A no sugar added formula does not contain any additional sugar other than the lactose sugar already present. Standard ice cream contains high amounts of sucrose and is not suitable for diabetics or low-carbohydrate dieters. Replacing the sugar with a polyol (polyhydric alcohol) such as maltitol allows one to make a no sugar added premium ice cream that tastes just as good and satisfies the consumer who cannot tolerate high levels of sugar.

Why is sucrose/corn syrup important to ice cream formulations?

Sucrose serves many purposes in an ice cream formulation. When replacing the sucrose/corn syrup, an ingredient must be selected that can perform the following functions:

- Sweetness
- Freezing point depression
 - Freezing performance
 - Body and texture
 - Shelf-life
- Flavor and flavor enhancement
- Solubility/Crystallization
- Total solids (Bulk)

Maltitol can be used to replace sucrose because it is 90% as sweet and functions similarly to sucrose in food and confectionery applications. The table above shows some of the similarities between sucrose and maltitol.

What is MALTISWEET® IC Maltitol Syrup and how can it be used?

MALTISWEET® IC Maltitol Syrup is a liquid polyol that can be used to replace sucrose in food and confectionery applications. It is a cost effective alternative to using a high-intensity sweetener with a bulking system and will provide a more natural, sweet-tasting profile. The ingredient statement for the product label is "maltitol syrup," which is more preferable to the chemical sounding names of other sweeteners. It is noncariogenic and lower in caloric content than sucrose.

MALTISWEET® IC Maltitol Syrup can be used as a direct replacement for sucrose in a no sugar added ice cream formulation. Its polymer distribution replaces sucrose and the need for 36 DE corn syrup solids. Sweetness can be adjusted by slightly increasing the amount of maltitol syrup added.

MALTISWEET® IC Maltitol Syrup can be used as the sole sweetening agent without adjusting the formulation or manufacturing parameters used for a sucrose formulation. Freezing point and shelf life will be equivalent to full sugar ice cream. If additional stabilizer is necessary, other maltitol syrups with added stability are available.

Where can I learn more about this product and application?

Please contact Corn Products Specialty Ingredients for further assistance and product information. The Applications Research/ Technical Service Laboratory is available to help you with your formulation needs.

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