

**INNOVATE CONFECTIONS WITH BARTEK MALIC AND FUMARIC ACIDS**

CONFECTION	INNOVATE WITH	
Traditional	MALIC ACID	FUMARIC ACID
Extruded—anise (black) licorice	Create fruit flavoured (apple, cherry-blackberry, kiwi-strawberry, chokeberry) licorice using Malic acid's prolonged tart taste to heighten fruitiness.	
Tableted / Compressed—sour dextrose candy	Create sugar-free (breath mints) or nutraceutical (vitamin C) compressed confections, or produce physical sensations such as a fizz, when "soda" is included with the acid. Use <b>powder grade</b> Malic acid. For the tablet premix, a granulation of: 100% through 20 mesh USS (841 microns) 100% on 60 mesh USS (250 microns) gives a smooth finished product.	
Aerated—chocolate malted milk balls	Combine dried fruit (cranberry, cherry, orange) powders/dried fruit concentrates with dried milk powder to create aerated products with a different character, texture and taste. Malic acid enhances fruit flavours and gives contrast to the chocolate coated or uncoated confection.	
Marshmallow (aerated) types: light, moist frappés, to firm, chewy, dry crisp		Ungrained marshmallow is very sticky and so it can be coated with fruit powders, fruit-bits, and a nonhygroscopic acid like Fumaric acid to give it more tartness.
Gelled/soft candy (acidified-fruity, non-acid—Turkish Delight)	Mint-flavoured sanded soft gelled candy using a combination of organic acids—citric, malic and lactic to intensify and prolong mint taste.	
Mint flavoured hard candies or chewing gums	Use Malic acid alone or in combination with other organic acids to intensify or boost mintiness of many confections.	
Low-calorie confections	Malic acid's prolonged tartness helps lift flavour notes that are sometimes suppressed by fat and sugar replacers.	
Hard candy (citric/malic)		To produce a unique tasting hard candy, Fumaric acid is cooked separately in corn syrup and water and then incorporated into a hard candy mass (sucrose, corn syrup & water).

# ACIDS IN CONFECTIONS

Flavour, sweetness and acidity are the three variables that give candy its unique character and primary taste appeal. To achieve good flavour impact, the optimum between the acidity and flavour levels must be selected.

In confectioneries, fruit flavours require the presence of acidity for flavour enhancement and in some instances, for flavour recognition. Basic fruit flavours are flat and lifeless in taste without the presence of acid. **Acid Brings the Flavour to Life!**

The **mintiness** of confectioneries such as hard and soft candies, and chewing gums seems to be intensified by using a single acid like Malic or a blend of acids. "Spearmint Leaves"<sup>®</sup> is a soft gelled candy which contains a blend of Malic, lactic and citric acids.

## When to Add Acid

Adding acid at the end of the process when the product is cooler helps minimize interaction with the sugar and other ingredients at the higher temperatures which may cause product breakdown.

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## References

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