

Taste experience

Manage savory flavors naturally



-  Flavor management
-  Cost-efficiency
-  Sodium-reduction
-  Natural solutions

In today's world of savory products, consumers are looking for exciting and increasingly exotic flavor profiles, for natural products, as well as for sodium-reduced products that fit into a health-conscious diet. Food manufacturers are developing new products to meet these consumer demands, while at the same time, looking for ways to formulate and produce as cost-efficiently as possible.

Challenges in flavor management, cost-efficiency, sodium-reduction and using natural ingredients, also provide market opportunities for innovative food manufacturers.

When developing a new savory product, the first priority is to develop a taste profile that encourages the consumer to first try the product and then to become a regular customer. Organic acids, as well as natural fermented products play a key role in the development of delicious savory food products. These solutions, when applied in savory applications are effective tools for boosting flavor and sodium-reduction.

Reducing addition levels of expensive ingredients, such as cheese powders, chicken- or beef extracts, improves cost efficiency but has an impact on taste experience. Corbion's portfolio enables the industry to manage flavor profiles, while reducing costs.

A dilemma that many producers face when reducing sodium in their products is how to restore flavor profile. PuraQ® Arome NA4 is a natural flavor that is ideal for savory food products. It acts as building-block to restore taste profile, enabling processors to achieve optimal flavor in reduced sodium products, without the need for expensive taste enhancers. PuraQ Arome NA4 is mainly used in processed

meat, bakery, sauces and dressings and ready-to-eat meals.

Natural solutions

PURAC and the PURAC® Powders are based on natural L-lactic acid, which is produced by fermentation from sugar. PuraQ Arome NA4 is a natural flavor produced by fermentation of specifically selected food cultures and natural substrates. The Verdad® portfolio contains multifunctional ingredients, based on fermentation. Verdad contains components which can enhance savory notes such as tomato, spices and herbs, and can be used in snacks and seasonings.



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Flavor management and cost-efficiency

Cheese products including sauces, yogurts, dressings and typical cheese blends for snacks, all benefit from the dairy enhancing effect of lactic acid, in both liquid or powder form. **Figure 1** shows that adding 0.3-0.5% PURAC Powder to a formulation can replace cheese powder. This results in cost-savings of up to 5%.

Other applications which can benefit from PURAC or PURAC Powders are soup mixes, seasoning, sauces, gravies and instant noodles. Lactic acid enhances tomato, onion, soy, hot pepper, chili and ginger flavors. **Figure 2** shows an Asian sweet and sour sauce. With the addition of lactic acid, the tomato flavor typically becomes sweeter, and spicy flavors are enhanced.

Sodium reduction

Using PuraQ Arome NA4 enables you to reduce sodium content of your products by up to 40%. As a natural flavor, it functions as a savory building-block, imparting spicy and salty notes.

Figure 3 illustrates how the perceived saltiness can be restored after reducing the sodium content of a mushroom soup by 30%.

Product	Description	Appearance
PuraQ® Arome NA4	Natural flavor	(dark brown) Liquid
Verdad® Powder N6	Vinegar	Powder
Verdad® F95	Fermented (cane) sugar	(dark brown) Liquid
PURAC®	Lactic acid	(clear) Liquid
PURAC® Powder	Lactic acid, Calcium lactate	Powder
PURAC® Powder S	Sodium lactate	Powder

PURAC Powder enhances the taste attributes of cheese

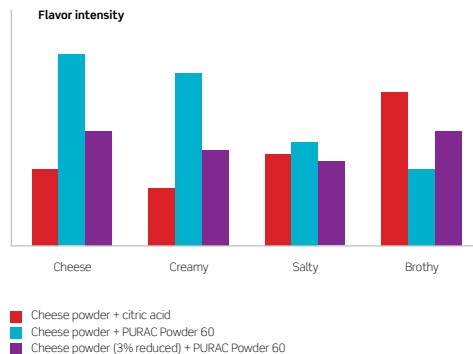


Figure 1

PURAC Powder enhances the savory notes in Asian sweet and sour sauce

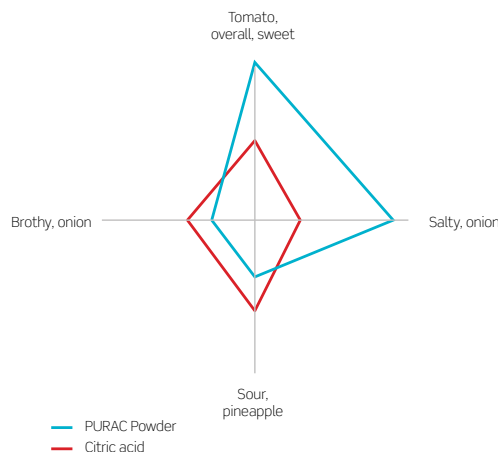


Figure 2

Positive impact of PuraQ Arome NA4 on perceived saltiness in mushroom soup

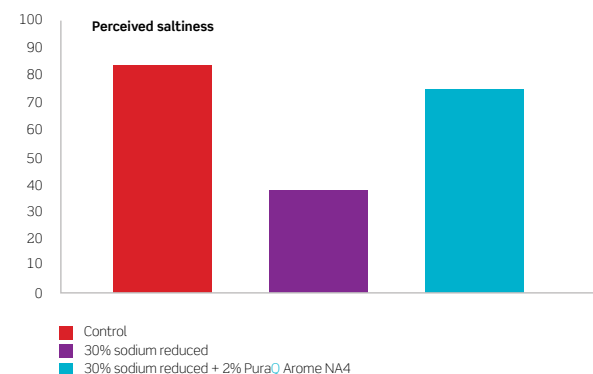


Figure 3

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 @CorbionFood

Corbion creates innovative ingredient solutions for leading food manufacturers around the world. Our expertise inspires customers to craft foods that start flavorful, stay fresh and remain safe, from date of production to date of consumption. Using sustainable solutions that deliver real, consumer-focused value, we work side-by-side with customers, helping them grow and create delicious food that capture peoples' palates and earn their trust. At Corbion our priorities as consumers shape the solutions we create, and as a result, feel confidence and pride in serving our own families and friends the products we help make possible.

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