

# Shelf-stable sauces, dressings and condiments

Corbion relishes solving your challenges



- Consumer-friendly labeling
- Extend shelf life naturally
- Balance taste
- Application driven portfolio

## Expertise That Makes a Difference

Sauces, dressings and condiments are long-standing, diverse markets that are growing. At the same time, new convenience products, like cooking sauces for pasta and rice, are becoming increasingly fashionable. Today's consumers expect their sauces, dressings and condiments to be tasty, offer long shelf life, and also to be healthy, free of artificial additives and to contain less sodium and fat. Sodium and fat both are barriers against the growth of micro-organisms. Reducing fat and sodium implies the need for additional hurdles to secure safety and shelf life. Sauces, dressings and condiments are normally sold shelf-stable which requires a robust preservation system in which different hurdles like pH, Aw, processing, packaging, and presence of antimicrobial ingredients work together to provide desired functionality.

## A Portfolio Built Around Your Challenges

Corbion offers several product lines to help producers perfect their beverages.

**Verdad®:** portfolio of vinegar-based and fermented ingredients designed for natural preservation of shelf-stable foods like sauces, dressings and condiments. Effective, natural antimicrobials to deliver the desired shelf life and replace artificial additives like sorbate and benzoate. Combinations with natural flavors to balance taste.

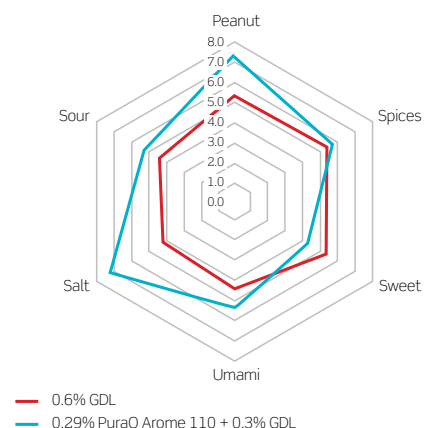
**PURAC®:** provides a natural effective solution for acidification and for the formulation of a mild, sour taste in sauces and dressings. Additionally it provides antimicrobial properties for both food safety as well as shelf life.

**PuraQ® Arome:** natural flavors developed to balance taste, increase savory and umami flavors and can also be used to restore salty taste in low sodium foods.

## Why Corbion in sauces, dressings and condiments?

- ▶ More than 80 years of experience in acidification, preservation and taste
- ▶ Predictive shelf life and safety models
- ▶ Global presence and local technical support
- ▶ Consumer driven innovations
- ▶ Fermentation expertise

## Flavor boosting with PuraQ Arome 110 in satay sauce (pH 4.9)





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Corbion ingredient	Labeling**	Form	Sodium (%)	pH (10%)	Dosage (%)	Benefits
<b>PURAC FCC</b>	Lactic Acid	Liquid	0	<3.0	0.2-0.8	<ul style="list-style-type: none"> <li>Natural acidification</li> <li>Mild sour taste</li> <li>Antimicrobial properties</li> </ul>
<b>PuraQ Arome</b>	Natural flavor	Liquid	0	-	0.5-2.0	<ul style="list-style-type: none"> <li>Contribute to savory taste</li> <li>Suitable for reduced sodium/salt products</li> <li>Different pH available</li> </ul>
<b>Verdad N330</b>	Vinegar, natural flavor	Liquid	0	3.7	1.8-2.4	<ul style="list-style-type: none"> <li>Effective, natural antimicrobial replacement for artificial preservatives</li> <li>Shelf life extension, main target LAB, yeasts and molds*</li> <li>pH reduction, adds sour taste</li> </ul>
<b>Verdad N335</b>	Vinegar, natural flavor	Liquid	0	4.1	2.0-2.6	<ul style="list-style-type: none"> <li>Effective, natural antimicrobial replacement for artificial preservatives</li> <li>Shelf life extension, main target LAB, yeasts and molds*</li> <li>Slight pH reduction, slight sour taste</li> </ul>
<b>Verdad F340</b>	Vinegar	Liquid	0	4.1	1.5-2.5	<ul style="list-style-type: none"> <li>Effective, natural antimicrobial</li> <li>Equal mold inhibition to potassium sorbate, also yeast inhibition*</li> <li>Minimum taste effect developed for fruit fillings</li> </ul>
<b>Verdad Powder N6</b>	Vinegar (powder)	Powder	23	5.8	0.5-1.0	<ul style="list-style-type: none"> <li>Superior <i>Listeria</i> control</li> <li>Mild vinegar flavour</li> <li>Neutral taste</li> </ul>
<b>Verdad F46</b>	Vinegar	Liquid	0	5.0	1.5-3.0	<ul style="list-style-type: none"> <li>Superior <i>Listeria</i> Control</li> <li>Mild vinegar flavor</li> <li>No undesirable sour taste</li> </ul>

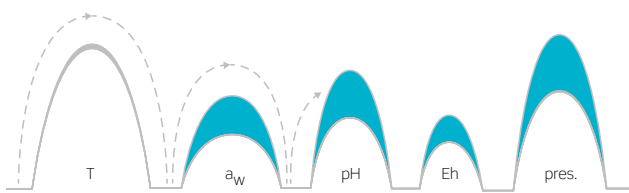
\* Ability to replace artificial preservatives depends on other parameters like pH and Aw for LAB, yeasts as well as mold control; ask your Corbion representative for more information.

\*\* Labeling may change subject to local food regulations and company policy

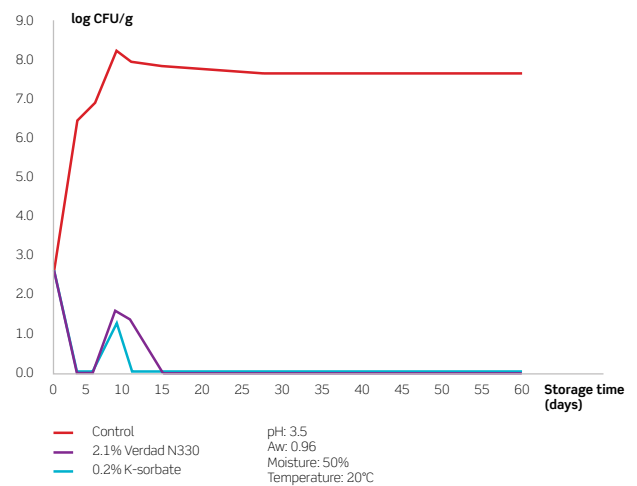
## Time- and money-saving tools

To help food producers with their shelf life and safety challenges, Corbion has developed predictive safety and shelf life models. These models guide in product development and indicate the effect of different parameters like pH, Aw, moisture content, temperature, antimicrobial ingredients on the shelf life.

## Hurdle technology



## Yeast cocktail growth in garlic sauce



Please note: Similar results have been reported for LAB cocktails. Ask your Corbion representative for more information.



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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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