





Verdad® N64

Nature's choice for label-friendly Listeria control



-  Consumer-friendly labeling
-  Listeria control
-  Toxigenesis delay of *Clostridium botulinum*
-  For uncured meat & poultry products

Verdad N64

Verdad N64 is a natural ferment derived from carefully selected food cultures. This truly unique blend of cultured sugar and vinegar includes organic acids, sugars and peptides. The neutral pH and balanced flavor of Verdad N64 make it ideal for Ready-to-Eat uncured meat and poultry products.

Consumer-friendly labeling

Today, consumers are carefully checking food product labels. This is especially true when buying meat and poultry, where authentic products are highly desired. As shoppers become more aware of the ingredients included in meat products, they look for ingredients they know and trust. Verdad N64 is labeled as “cultured sugar and vinegar”. Verdad N64 can be used in products bearing ‘made with all natural ingredients’ or ‘no artificial preservatives’ claim.

Listeria control

Verdad N64 is specifically designed to offer food safety by controlling the growth of *Listeria monocytogenes*. It inhibits the growth of Listeria in uncured meats up to 90 days. Traditional antimicrobials make it difficult to obtain complete control of Listeria in uncured products through an extended shelf life.

Clostridium botulinum

Clostridium botulinum produce toxins that can cause serious illness in humans. Nitrite is effective in controlling the growth of Clostridium, hence uncured products are at risk. Specific intrinsic barriers are needed to control the outgrowth of Clostridium. Verdad N64 is able to effectively inhibit the formation of Clostridium toxin.

About ferments

Fermentation is a centuries-old process that imparts multiple benefits to a finished food product, including enhanced flavor, improved texture and an increased microbiological stability. The addition of ferments to food products yields all of these advantages without actually fermenting the food product itself. These benefits can be attributed to the formation of fermentation intermediates such as organic acids, (poly) saccharides and peptides. Corbion Purac is the largest and most experienced producer of antimicrobial ingredients .



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Target use

Verdad N64 is most effective in cooked uncured poultry products such as turkey breast and chicken rolls. Depending on the application and required safety targets, an addition level of 2.5-3.5% (w/w) is recommended.

Listeria control

To measure the effect of Verdad N64 on *Listeria monocytogenes*, a challenge study in uncured turkey breast was performed. Figure 1 shows that Verdad N64 can be used to prevent 2 log outgrowth of Listeria for a 90 days period.

Clostridium botulinum

To showcase the effect of Verdad N64 on the toxin formation of Clostridium, a test has been done in uncured turkey breast (see Figure 2). Without presence of nitrite, toxin formation occurred within two weeks of storage. Presence of Verdad N64 delays toxigenesis to more than 8 or more than 12 weeks. This study shows that Verdad N64 effectively delays toxin formation in low/no nitrite containing products.

Verdad N64	
Form	Liquid
Labeling	Cultured sugar Vinegar
Target use level	2.5-3.5%

Listeria monocytogenes count of cooked uncured turkey roll stored at 39°F/4°C

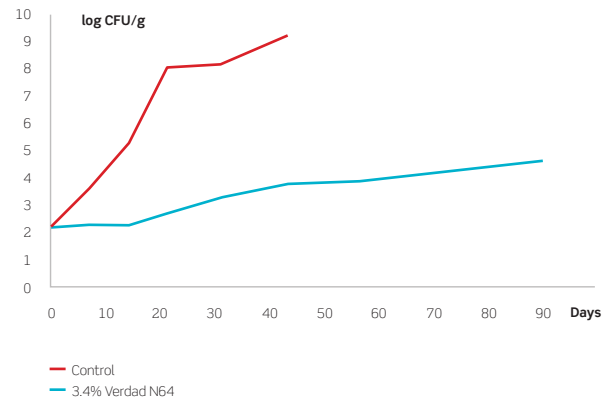


Figure 1

Delay in toxigenesis in uncured turkey breast stored at 50°F/10°C

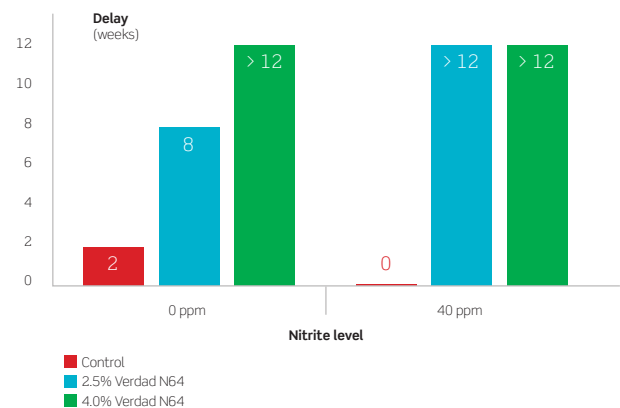


Figure 2



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With over 80 years of fermentation expertise and the use of natural raw materials to produce exceptional food and beverage ingredients, Corbion Purac has a wealth of expertise in the world of biobased food ingredients. Corbion is the global market leader in lactic acid, lactic acid derivatives and lactides, and a leading company in functional blends containing enzymes, emulsifiers, minerals and vitamins. Corbion operates 10 production plants, in the USA, the Netherlands, Spain, Brazil and Thailand, and markets its products through a worldwide network of sales offices and distributors.

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