PROTERIA® CA
IN HUMMUS APPLICATION

Handary
SHELF LIFE

KEY BENEFITS

- Inhibition of microbial growth;
- Maintain freshness and authentic appeal;
- PH falls, purge loss, color loss and acidification prevention;
- Cost effective;
- Shelf-life extension;
- Clean label;

	Proteria® CA
Code	0602
Registration Number	Clean Label
Organoleptic Impact	No Impact
Source	Non-GMO, Renewable
Thermal Stability	Up to 121°C
Applicable pH	2 - 9
Recommended Dosage	2-5g/Kg
Packing Size	1L, 20L
Appearance	Brownish Liquid
Labelling	Fermented Cane Sugar

NATURAL ANTIMICROBIAL IN HUMMUS

Hummus is a classic bean spread which has gained widespread popularity as an appetizer. Made from chickpeas, hummus is rich in nutrients and boasts a high availability of both simple and complex carbohydrates. Hummus is a versatile spread which can be enjoyed with pita bread, vegetables, and sandwiches. However, with a pH of 5 and a relatively high-water activity, hummus is susceptible to microbial growth, which can limit its shelf-life.

Fresh hummus is particularly vulnerable to visible spoilage, dryness or moisture loss, and the growth of various yeasts, moulds, and lactic acid bacteria. To combat these issues, this review provides insight into the use of Proteria® CA in hummus production.

Proteria® CA is a natural, weak-acid metabolite produced by fermenting cane sugar with Lactobacillus paracasei. It can serve as a substitute for vinegar in preventing the growth of yeast and bacteria, and it offers a clean label alternative to artificial additives like sorbates and benzoates.

Overall, the application of Proteria® CA can enhance the shelf-life and quality of hummus with a cost-effective solution.

OUR BRANDS

PROTERIA® CA
Cultured Cane Sugar

CASE STUDIES

The primary objective of this study was to evaluate the impact on taste of Proteria® CA in culinary products, specifically in hummus, and determine the optimal dosage. In addition to taste, the study aimed to test the antimicrobial effects on yeasts, molds, and Lactic Acid Bacteria of Proteria® CA at maximum dosages throughout the product's shelf-life.

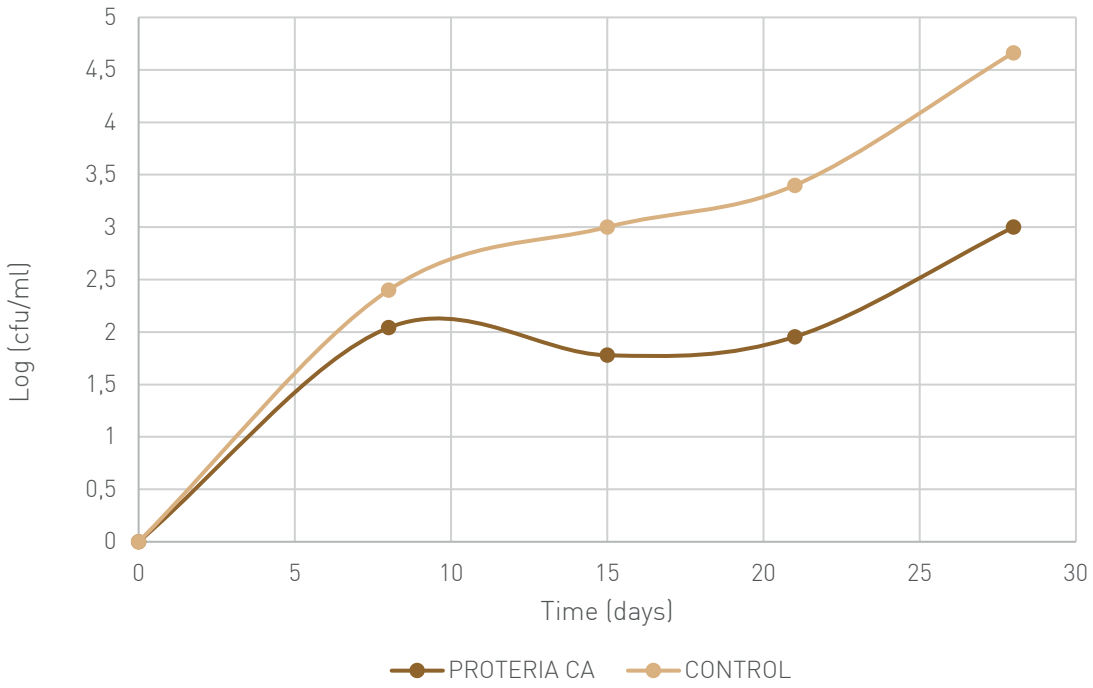
By assessing the microbial effects of this natural product, we can identify the optimal combination for maximum taste and preservation benefits. This research will contribute to the development of high-quality and safe culinary products with extended shelf-life, ensuring customer satisfaction and reducing waste.

PROTERIA® CA : HUMMUS SHELF-LIFE EXTENSION

In the graph that you can find below, we show the results of the microbial analysis for the yeast and molds in hummus carried out by Handary.

In the study, we wanted to compare the microbial load of the hummus by comparing a control sample with one treated with 1% (w/w) of Proteria® CA, later storing them at 4 ° C.

Control samples, without the addition of natural or chemical preservatives, reached an undesirable level of yeasts and molds after 20 to 30 days of storage. However, samples treated with Proteria® CA showed a potential to extend the shelf-life by more than 30 days, thus showing an acceptable yeast and mold record even on day 30 itself.



CONCLUSION

In general, these plant-based food products have a shelf life of 10 days when stored in MAP and at refrigerated temperatures. However, with the use of Proteria® CA , these products can last up to 30 days in perfect conditions.

Proteria®CA inhibits yeasts and molds in hummus even after one month, making it a promising natural alternative to synthetic preservatives, suggesting Proteria® CA could be an effective natural preservative in culinary products.





APPLICATION GUIDELINE

The following guideline will assist you to get the optimum solution by using Handary Proteria® CA fermented cane sugar to effectively and naturally extend the microbial stability and the shelf-life of hummus.

The recommended doses of Proteria® CA are added along with the other dry ingredients at the beginning of the mixture of the hummus formulation. Dosages ranging between 2 and 5 g of Proteria® CA are added for every kilo of the final product.

1. Direct Addition Into Hummus Formulation

Follow the suggested dosages to apply Proteria® CA directly into soy patty formulation.

Ingredient	Application		Benefits	Dosage
Proteria® CA	Culinary Dishes	Dips & Sauces	Growth control and stability of yeast & molds	2– 5 g/kg

2. Hummus Manufauring Process

Follow the representative production process flow chart of hummus and the recommended stage of product incorporation to get the best efficiency for Proteria® CA application.