

## Naturally preserving product flavor, color and freshness

PlantGuard™ FS is a fat soluble liquid emulsion of natural plant extracts with potent antioxidant activity. As a highly effective natural preservative, it helps to prevent lipid oxidation in a variety of food applications.

### Unique features of PlantGuard™FS



Neutral taste





Non-GMO



Heat stable



Kosher and halal suitable



Oil Soluble

Natural plant extracts



Low cost-in-use

#### The benefits of PlantGuard™ FS

- **Extends shelf life**
- **Improves freshness**
- **Enhances flavor**
- Improves texture
- Improves color stability
- Supply chain security



For more information, please visit: prinovaglobal.com or contact your local sales office.

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## The unique features of PlantGuard™ FS be used?

**Recommended use:** Between 0.05% and 0.3% of final product.

**When:** Added at the earliest possible stage of manufacturing

With What: Pre-dissolved in the oil phase during manufacturing. The oil solution will become clear once the processing temperatures reach in excess of 80°C

# Preserving a wide range of food applications

PlantGuardTM FS can provide a wide range of functional benefits in both sweet and savory, fat dominant applications. Including



#### Meats

Particularly effective in fried meat applications including chicken nuggets or fish sticks



#### **Fats & Spreads**

Ideal for preserving the quality of fats and oils



#### **Baked goods**

Perfect for use in pastries and doughnuts



#### **Snacks**

Shown to have great effect in fried snack applications, including chips and crackers

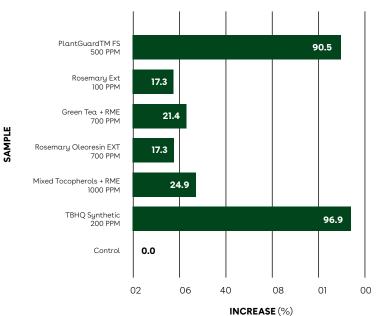


#### Condiments

great for oil-based seasoning, such as pesto and mayonnaise

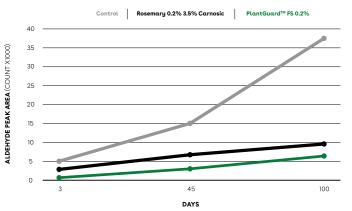
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### Superior preservation with PlantGuard™ FS



PlantGuard™ FS showed superior alternative oxidase (AOX) activity over common antioxidants such as Rosemary and Mixed Tocopherols in vegetable oils. Based on Rancimat results, at an inclusion level of 500 ppm, PlantGuard™ FS significantly outperformed both 1000 ppm of Mixed Tocopherols, and 700 ppm of Rosemary Extract in delaying the onset of rancidity of sunflower oil.

### **Extending shelf life**



PlantGuard™ FS has been successfully incorporated into sauces, which contain high content of oils. When used in pesto, PlantGuard™ FS can successfully inhibit oxidation levels (measured in Aldehyde content) and thereby extended shelf life of the product, over common antioxidants such as Rosemary.