7 PRODUCTS FOR SAFE PRODUCTION AND A LONGER SHELF-LIFE OF YOUR FOOD PRODUCTS

NEW STABILOTON ECO Art 90171

STABILOTON ECO (powder form) is completely soluble in oil (at 40°C). Carnosic acid content: 14 %

Usage rate:
Food products in general: 0.2 – 0.5 g per kg product (depending on the application)

Packaging: Drum of 200 g / container of 2.5 kg

STABILOTON DEOS Art 78426

STABILOTON DeOS has a neutral flavour and is completely oil-soluble (10 – 15 % in oil at 70°C, filtration). Carnosic acid content: 12 %

Usage rate:
Food products in general: 0.2 – 1 g per kg product (depending on the application)

Packaging: Drum of 200 g / container of 2.5 kg

STABILOTON OS Art 792

This powder form STABILOTON is oil-soluble.
Carnosic acid content: 17 %

Usage rate:
Food products in general: 0.1 – 0.4 g per kg product (depending on the application)

Packaging: Drum of 200 g / container of 2.5 kg

STABILOTON OS ULTRA Art 39370

STABILOTON OS ULTRA (powder form) is oil-soluble.
Carnosic acid content: 40 %. It is especially suitable for application in white/light products as well as in food products with a sensitive product flavour, e.g. citric flavourings, dressings, snack products and others

Usage rate:
Food products in general: 0.09 – 0.15 g per kg product (depending on the application)

Packaging: Drum of 200 g / container of 2.5 kg

STABILOTON OS ULTRA LIQUID Art 39371

NEW! STABILOTON OS ULTRA LIQUID is a liquid, oil-soluble product. Carnosic acid content: 4 %.
Ideal for direct application in oils.

Usage rate:
Food products in general: 0.25 – 0.9 g per kg product (depending on the application)

Packaging: Tube of 1 kg

STABILOTON WS Art 791

STABILOTON WS (powder form) can be dissolved in oil-and-water emulsions as well as in water solutions.
Carnosic acid content: 4 %

Usage rate:
Food products in general: 0.75 – 1 g per kg product (depending on the application)

Packaging: Drum of 750 g / container of 10 kg

STABILOTON WS LIQUID Art 38944

STABILOTON WS is a liquid, water-soluble product.
Carnosic acid content: 4 %

Usage rate:
Food products in general: 0.75 – 1 g per kg product (depending on the application)

Packaging: Tube of 1 kg / container of 10 kg

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FOOD INDUSTRY

THE STABILOTON FORMULA: THE *natural* ANTIOXIDANT

Your Food Products Remain Fresh for a Longer Period of Time

natural ROSEMARY EXTRACTS

PROTECTION FROM AUTOXIDATION!

Highly effective Antioxidant on Plant Basis +++ From our own Plantation +++ Declaration: Spice Extract

STABILOTON is one of our outstanding innovations: Through continuous development of natural, pure plant antioxidants, RAPS has established a product range suitable for a multitude of applications: STABILOTON is suitable for meat, poultry and fish products, deli products, dairy and bakery products. Unique advantage: Based on natural herbs!

YEARS OF RESEARCH

STABILTON is an extract from the rosemary plant which naturally contains a high content of antioxidative carnosic acid.

We go to great lengths to deliver a consistently high quality product – from our gentle cultivation process and the selection of the very best rosemary to our unique production methods and strict quality controls.

RAPS has worked on **STABILOTON** for years to obtain **high quality extracts with a standardized content of carnosic acid, suitable for almost all food applications.**

PROVEN EFFECTIVENESS

The highly antioxidant effect of carnosic acid and carnosol in **STABILOTON** in comparison to conventional antioxidants has been proven by in-depth laboratory tests. Carnosic acid or carnosol was added to a fat matrix and the peroxide value was measured at regular intervals. Further scientific studies confirm this high effectiveness in various food applications. Storage tests with different food products clearly showed the advantages of applying **STABILOTON. STABILOTON** has been successfully used in the meat processing industry for many years in order to improve the flavour of deep-frozen as well as chilled meat products.

LITHO:
schärfer
struktur

The Rosemary Extract:

- The rosemary plant (Rosmarinus officinalis L.) contains a wide range of highly effective antioxidant ingredients from the phenolic diterpene group. Of these ingredients carnosic acid has the highest antioxidant effect
- RAPS' gentle production method of supercritical extraction safeguards the precious ingredients of the rosemary plant without temperature and oxidative stress. These extraction conditions are procedure-specific and protect the active ingredients. Only supercritical extraction can deliver the higher content of carnosic acid present in our STABILOTON products
- The high content of carnosic acid in our STABILOTON products enables low usage rates. This ensures protection of your products without flavour alterations

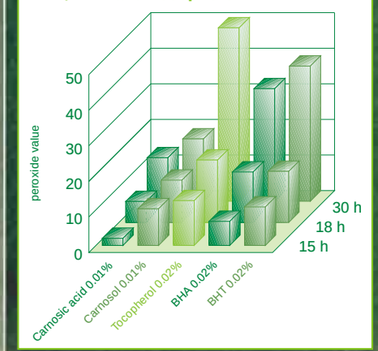
The Effect:

- Protection against fat oxidation by neutralizing free radicals, delaying the oxidation process
- Protection against rancidity and off-flavour (e.g. "warmed over flavour")
- Protection against discolouring and colour decomposition caused by oxidation

The Advantages for You:

- **Low usage rates**
  This means minimum costs and less storage volume
- **Available in liquid or powder form**
  STABILTON is always perfectly suited to your production process
- **Longer storage time**
  STABILOTON ensures a longer storage time for all food products which are prone to rancidity
- **Universal application**
  We offer STABILOTON seasonings for
  – small and bulk production
  – for products containing water
  – for products containing oil and fat

Advantage of STABILOTON compared to BHA, BHT and Tocopherol



The smaller the bar, the less autoxidation has advanced in the fat. The antioxidant ingredients carnosic acid and carnosol in STABILOTON show a clearly higher antioxidant effect, even when using low addition rates.

SALAMI FORMULA:

The Advantage when Storing Products with a high Fat Content

IN GENERAL

Meat and sausage products with a high fat content are especially vulnerable to autoxidation. If oxygen gets in contact with the fat complex, free radicals are created. The result is rancidity, "old flavour" and an unappetizing colour development. Special added antioxidants delay oxidation of the sausage products by a multiple of its shelf-life and guarantee a fresh flavour and appealing colour even after months stored in the freezer.

TYPICAL APPLICATIONS

STABILOTON provides an effective and long-lasting protection against rancidity. The fresh flavour is retained for a longer period of time. **Here some examples of applications in meat and sausage products:**

Salami (coarse and fine particle size): The shelf-life of salami can be prolonged by up to 7 months (when stored at -18°C). This enables application in frozen ready meals (Pizza, Baguettes). The shelf-life of these products can be prolonged by up to 12 months.
Recommendation: STABILOTON OS

Cooked Ham: The shelf-life can be prolonged by up to 5 months (when stored at -18°C). This enables application in frozen dishes. The shelf-life is prolonged by up to 12 months.
Recommendation: STABILOTON WS LIQUID

Minced Meat (for Burgers): The creation of the undesired "warmed over flavour" in fried beef burgers is effectively prevented. This flavour occurs within a short period of time if pre-cooked products are chilled or frozen. Unsaturated fatty acids oxidize during chilling or freezing. This results in the creation of flavour-intensive decomposition products, e.g.hexanal. Additionally the minced meat obtains a clearly redder colour.
Recommendation: STABILOTON OS

Chicken Wings: The shelf-life can be prolonged by up to 6 months. A positive influence on the sensory properties is achieved. Without STABILOTON an "old flavour" occurs already after 3 months.
Recommendation: STABILOTON WS LIQUID

FISH AND DELICATESSEN FORMULA:

Fresh Flavour, Fresh Appearance

IN GENERAL

Our long experience with antioxidants in the meat and sausage sector provides advantages in many other application areas. The level of autoxidation in fish products for example, can easily be recognized by its colour and odour. This indication is connected to the oxidation of the unsaturated fatty acids in the fish. The application of STABILOTON considerably delays this process, thus improving the sensory properties of the fish.

TYPICAL APPLICATIONS

Fish can effectively be protected against rancidity and colour alterations. The fresh flavour is retained for a longer period of time. **Here some examples of selected applications:**

Smoked Salmon Pieces (frozen): The shelf-life can be prolonged by up to 7 months (when stored at -18°C). Additionally the typical salmon colour remains unchanged for up to 12 months. Considerable sensory advantages can be achieved by applying STABILOTON.
Recommendation: STABILOTON WS LIQUID

Wild and Farmed Smoked Salmon: Sensory properties of both salmon types can clearly be improved by applying STABILOTON within the shelf-life. The shelf-life can be prolonged by at least 20%.
Recommendation: STABILOTON OS / STABILOTON WS

Smoked Salmon Slices (stored on display, chilled): The application of STABILOTON retains the typical red salmon colour. Alterations of the sensory properties do not occur in frozen dishes within 6 months of storage, and in chilled products on display (7°C) within 7 days.
Recommendation: STABILOTON OS / STABILOTON WS

Herring Fillets: The sensory properties and hence the shelf-life can be prolonged by up to 12 months (when stored at -18°C). Autoxidation processes and negative colour and sensory alterations are effectively delayed over this period of time. STABILOTON is directly added to the salt water (0.5 g per litre).
Recommendation: STABILOTON WS LIQUID

Mayonnaise: Sensory properties and colour can clearly be improved within the shelf-life (stored under refrigeration). STABILOTON acts as a sequestrant and scavenger in the fat phase, thus blocking autoxidation more effectively than EDTA.
Recommendation: STABILOTON DeOs

BAKE FRESH FORMULA:

For Fresh Croissants with a Naturally Prolonged Shelf-Life

IN GENERAL

Requirements in the convenience and snack market are constantly growing. For example frozen doughs for baking at home are very popular amongst consumers. There are huge opportunities for sales growth in this area. This sector also suffers from problems of autoxidation.

TYPICAL APPLICATIONS

STABILOTON provides an effective and long-lasting protection against rancidity in all applications. The fresh taste is retained for a longer period of time.

Here some examples of selected applications in the bakery industry:

Croissants: The shelf-life can be prolonged by up to 2 months (when stored at -18°C). The products are fresher and more crisp.
Recommendation: STABILOTON OS or STABILOTON DeOS

Croûtons: The sensory properties can clearly be improved throughout the shelf-life (when stored at room temperature). The sprayed-on fat coating (1.2 g STABILOTON OS ULTRA LIQUID per kg fat) is effectively protected against oxidation. The croûtons remain fresh and crisp for a longer period of time. Croûton samples without STABILOTON turn rancid after 8 months. The taste of samples with STABILOTON is still fresh after 12 months.
Recommendation:
STABILOTON OS or **STABILOTON OS ULTRA LIQUID**

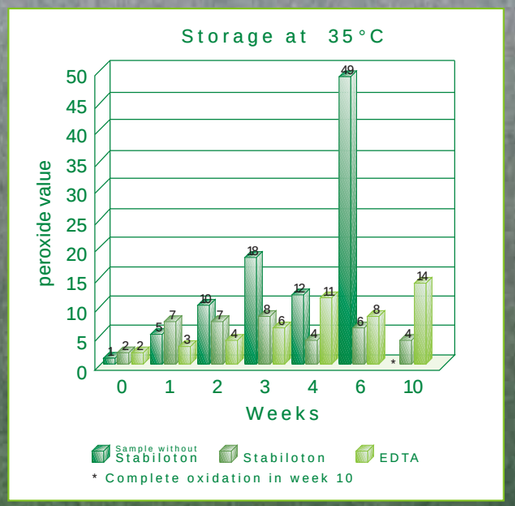
Fillings: Nut fillings are prone to rancidity due to their high fat content. STABILOTON provides key advantages for shelf-life and storability – on a purely natural rosemary basis. STABILOTON protects the unsaturated fatty acids in the nut oil against oxidation, thus improving sensory properties. STABILOTON is directly added into the nut paste (0.75 g per kg final product). The label declaration guarantees the consumer that no chemical additives were applied.
Recommendation:
STABILOTON OS or **STABILOTON OS ULTRA LIQUID**

DAIRY FORMULA:

For Long-lasting Freshness of Milk Powder Products

IN GENERAL

The higher the fat content in dairy products, the faster the sensory properties deteriorate. In order to delay autoxidation in dairy products, the application of STABILOTON is recommended.



TYPICAL APPLICATIONS

STABILOTON provides an effective and long-lasting protection against rancidity. The fresh flavour remains unchanged for a longer period of time. **Here an example for application in the dairy industry:**

Crème Fraîche Powder: The fat content is protected against autoxidation for a longer period of time. Sensory properties are improved within the shelf-life (when stored at room temperature). The stability of the powder is not influenced which enables the exchange of ascorbyplamitate E 304 by STABILOTON.
Recommendation: STABILOTON DeOs