



Global Specialty Ingredients

PRODUCT LIST

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Product List Summary

Product Category	Products \ Brand Name
Antioxidant, Antimicrobials & Preservatives	EN-HANCE® TBHQ, BHT & BHA
Antioxidant, Antimicrobials & Preservatives	FORTIUM® MT90 & MT70
Antioxidant, Antimicrobials & Preservatives	SHIELD CT, FL, CA & NA
Antioxidant, Antimicrobials & Preservatives	BactoCEASE [™]
Antioxidant, Antimicrobials & Preservatives	AMPLIVITA TM
Antioxidant, Antimicrobials & Preservatives	AMPLIFRESH TM



EN-HANCE® TBHQ,

EN-HANCE® BHA, EN-HANCE® BHT,

EN-HANCE® ASCORBYL PALMITATE,

EN-HANCE® AP10 - Liquid &

EN-HANCE® A131 - TBHQ Liquid.

Product Statement:

EN-HANCE® brand synthetic antioxidants are synergistic blends formulated with time-tested active ingredients. At maximum performance they protect foods from oxidation that can rob your product's natural flavor, color and aroma even when solubility, heat and stability are an issue. **EN-HANCE®** formulations are available in economical, easy to use, liquid forms as well as dry and oil-soluble formulations. Liquid blends offer operational ease and uniform dispersion throughout oil-based products, unlike typical TBHQ products, resulting in in-consistent product performance.

Benefits:

- Terminate free radical chains in typical oxidation.
- Offers superior and wide spectrum of antioxidant activity.
- Protects oils and fats from oxidation.
- Helps to preserve nutritive value of oil or fat.
- Stable at plating temperatures.
- Retains palatability of oils and fats.
- Reduced oil absorption on/in the fried food.
- The ability to maintain production quotas and quality criteria while cooking at lower temperatures.
- Reduced energy consumption for heating purpose.
- Less FFA and especially OFA, less oxidative degeneration.
- Improved sensory properties.
- Absence of undesirable effects on color, odor and taste.
- Compatible with the food and suitable for food application.
- Stable under the conditions of processing, frying,
- Keeping desired quality at various temperature and storage condition.

Application:

EN-HANCE® brand antioxidants are formulated with time-tested ingredients proven to protect foods containing fats and oils such as; baking mixes, meat products, nuts, and potato chips, vegetable oils, frying oils, margarines, lard, cookies, sausages and cereals.

Dosage:

Dosage of 100ppm to 200ppm w/w, **EN-HANCE®** range antioxidants to be used.

Certification:

EN-HANCE® range products are being certifies for following standards and Certifications: - Halal Cert, Kosher Cert, ISO 9000, ISO 22000 and HACCP.



FORTIUM® MT90 – Liquid, FORTIUM® MT70 – Liquid, FORTIUM® C20, GT Fort Liquid, Fortra DRY & FORTIUM® RGT

Product Statement:

FORTIUM® brand natural plant extracts is comprised of proprietary rosemary extract and is also available as a synergistic blend of rosemary and green tea extracts. FORTIUM®/NaturFORT is a versatile combination of rosemary and green tea that complement each other by providing superior protection with minimal impact on flavor, color and odor profiles. FORTIUM® brand plant-derived antioxidants are comprised of a line of mixed tocopherols and are also available as formulated blends. Our tocopherols formulations can provide extra protection for high stress processing conditions. Both plant-derived antioxidants and plant extracts have shown to be especially efficacious in extending the shelf-life of food products with high fat oil content. FORTIUM® brand provides a desirable natural alternative to time-tested synthetic antioxidants such as BHA, BHT, or TBHQ.

Benefits:

- Terminate free radical chains in typical oxidation.
- Offers superior and wide spectrum of antioxidant activity.
- Protects oils and fats from oxidation.
- Helps to preserve nutritive value of oil or fat.
- Stable at plating temperatures.
- Retains palatability of oils and fats.
- Reduced oil absorption on/in the fried food.
- The ability to maintain production quotas and quality criteria while cooking at lower temperatures.
- Reduced energy consumption for heating purpose.
- Less FFA and especially OFA, less oxidative degeneration.
- Improved sensory properties.
- Absence of undesirable effects on color, odor and taste.
- Compatible with the food and suitable for food application.
- Stable under the conditions of processing, frying,
- Keeping desired quality at various temperature and storage condition.

Application:

Our **FORTIUM®** brand natural antioxidant line derived from mixed tocopherols keeps food fresh naturally and is especially efficacious in food products with high fat oil content such as; meat and poultry products, nuts, spices, salad dressings, mayonnaise, marine oils, lard vegetable oils, instant noodles and cereals.

Dosage:

Dosage of 100 - 200ppm w/w, **FORTIUM®** range antioxidants to be used.

Certification:

FORTIUM® range products are being certifies for following standards and Certifications: - Halal Cert, Kosher Cert, ISO 9000, ISO 22000 and HACCP.



SHIELD CT,

SHIELD FL,

SHIELD CA &

SHIELD NA.

Product Statement:

SHIELD® brand liquid antimicrobial formulas are synergistic blends of active ingredients that control microbes, preventing spoilage and mold growth. It provides homogenous, even dispersion throughout dough, eliminates irritating dust common with dry preservatives, and improves handling without affecting your product's taste.

Benefits:

With SHIELD, you can also benefit from:-

- Control microbes, preventing spoilage and mold growth.
- Increased dough softness, moisture retention, and finished product flexibility.
- Optional automation to reduce weighing and variability.
- High concentration, reducing freight, handling, and storage expenses.
- Non-corrosive, environmentally friendly
- Water soluble liquid
- Ideal complete dispersion
- Improves preservative effectiveness (optimal pH)
- Addition of preservative into the water treats source microbes require for growth the water
- Combination products
- Application automation

Application:

The following SHIELD products are available for all application in all markets:

SHIELD CT Specifically formulated for corn tortillas manufactured with

masa flour.

SHIELD FL An alternative to the inflexible dry preservative formulas for

wheat tortillas and bakery products leavened with baking

powder.

SHIELD CA An improvement to dry calcium propionate, offering better

taste and dispersion.

SHIELD NA A replacement for dry sodium propionate, offering better

dispersion that provides a more consistent finished product.

Dosage:

Dosage of 0.10 - 1.00% w/w, **SHIELD**® range antimicrobials to be used.

Certification:

SHIELD® range products are being certifies for following standards and Certifications: - Halal Cert, Kosher Cert, ISO 9000, ISO 22000 and HACCP.



BactoCEASETM & BactoCEASETM NV

Product Statement:

BactoCEASE ™ is a liquid, buffered vinegar-based product which addresses consumers' concerns over food safety, especially in processed meat and poultry products. *Listeria monocytogenes* is ubiquitous to nature and can be present in soil, water, on food contact surfaces and within food processing facilities. BactoCEASE™ liquid based antimicrobial is designed to protect Ready-to-Eat meat and poultry products from *Listeria monocytogenes*. This propionic acid-based antimicrobial solution is proven to extend product shelf-life more consistently in comparison to traditional lactate-based products. BactoCEASE™ is applied using a lower application rate providing you lower sodium contribution and cost-in-use. BactoCEASE™ formulations are available in economical, easy to use, liquid forms. Time-tested ingredients such as vinegar in BactoCEASE™ can be an effective means of intervention.

Benefits:

- Protects Ready-to-Eat meat and poultry products from Listeria monocytogenes
- Extends product shelf-life more consistently in comparison to traditional lactates
- Lower application rate
- Reduced sodium vs. lactates

Application:

This Antimicrobial Systems is used in ready-to-Eat meat and poultry products like uncured Turkey, Cured Turkey, Deli-Ham, Hotdogs, Deli-Roast Beef and Frankfurters.

Dosage:

Dosage of 0.10 - 1.00% w/w, **BactoCEASE** ™ range antimicrobials to be used.

Certification:

BactoCEASE ™ range products are being certifies for following standards and Certifications: - Halal Cert, Kosher Cert, ISO 9000, ISO 22000 and HACCP.



AMPLIVITATM

Product Statement:

AMPLIVITA™ antimicrobial system is a synergistic blend of active ingredients designed to address the unique challenges of Indian sweet manufacturers. AMPLIVITA™ extends the freshness of ethnic sweets by controlling microbes, preventing spoilage and mold growth. This highly concentrated formulation allows you to reduce freight, handling and storage expenses while delivering the original taste of product in spite of scale-ups. AMPLIVITA™ is a non-corrosive formula that provides ideal, even dispersion throughout your sweets to keep them fresh and delicious.

Benefits:

AMPLIVITA™ also offers several advantages over dry preservatives are:-

- Superior solubility,
- Enhanced stability,
- An optimal and neutral pH,
- Eliminating irritating dust common.

Application:

AMPLIVITA™ range of products is mainly used by sweet manufacturers. It's widely used by Indian Sweet Manufacturers to extend the freshness of ethnic sweets.

Dosage:

Dosage of 0.10 - 0.30% w/w, **AMPLIVITA™** range antimicrobials to be used.

Certification:

AMPLIVITA™ range products are being certifies for following standards and Certifications: - Halal Cert, Kosher Cert, ISO 9000, ISO 22000 and HACCP.



$\mathbf{AMPLIFRESH}^{\mathsf{TM}}$

Product Statement:

AMPLIFRESH™ brand antimicrobial system is an effective non-corrosive ingredient that controls microbes, preventing spoilage and mold growth. This highly concentrated formulation allows you to reduce freight, handling and storage expenses without affecting your product's taste. AMPLIFRESH™ is a cleverly designed synthetic antimicrobial system to keep cakes & muffins fresh, safe and tasting good for a longer period of time.

Benefits:

- Adheres to food regulations & highest quality norms.
- Easy to use paste without any additional steps.
- Freshness extensions possible over conventional options.
- Broad spectrum of action.
- Effective against yeast, mold and numerous bacteria.
- Doesn't impact natural flavour profile even at higher recommended usage levels.
- Fresh, safe and tasty products to consumer.
- Cost savings as reduction in product spoilage and market returns.
- Opportunity to expand distribution deeper in markets.
- Enhanced Brand Loyalty
- Enhanced Food Safety.

Application: It provides ideal, even dispersion throughout your cake and muffin mix, eliminating dust common with dry preservatives.

Dosage: Dosage of 0.10 - 0.44% w/w, AMPLIFRESH ™ range antimicrobials to be

used.

Certification: AMPLIFRESH™ range products are being certifies for following standards

and Certifications: - Halal Cert, Kosher Cert, ISO 9000, ISO 22000 and

HACCP.