



DECAS BOTANICAL SYNERGIES' NUTRICRAN[®] AM is an all natural antimicrobial ingredient for the food preservation market. NutriCran[®] AM is a scientifically derived natural bio-preservative scientifically shown to inhibit *Listeria monocytogenes* in beef and fish. The proprietary blend is made up of DBS' cranberry powder and RAD Natural Technologies, Ltd. Origanox[™] oregano extract.

DRIVEN BY SCIENCE







A recently published study determined that NutriCran[®] AM showed increased antimicrobial activity for inhibiting *Listeria monocytogenes* and that the synergistic natural food-grade ingredient may provide an additional protection beyond that of physical and other chemical treatment methods. (Lin et al. *Applied and Environmental Microbiology*, Sept. 2004).

Listeria monocytogenes is a bacterium found in many food products and has been associated with food-borne outbreaks in North America and Europe. *Listeria* often lives in cold moist environments and according to the Centers for Disease Control (CDC) is responsible for 3.8 percent of food-borne illness-related hospitalizations and 27.6 percent of food-borne disease-related deaths.

A BRAND YOU CAN TRUST

NutriCran[®] AM is a quality GRAS-approved standardized product with uniform color, content, and flow. The NutriCran[®] logo is available via a royalty-free licensing agreement. Use of the NutriCran[®] trademark differentiates products from other food products, and assures consumers that it is supported by scientific research, and is processed in a GMP manufacturing facility.

BENEFICIAL ATTRIBUTES AND MARKET APPLICATIONS

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|  Natural bio-preservative for improving product shelf life |
|  Scientifically shown to inhibit <i>Listeria monocytogenes</i> |
|  Made with GRAS-approved ingredients |
|  All natural botanical source |
|  Enables "green" labeling of food products |
|  A superior source of antioxidants |

EXPERIENCE THE DECAS DIFFERENCE

Decas Botanical Synergies (DBS), a division of Decas Cranberry Products, Inc., is a developer, manufacturer, and marketer of proprietary value-added fruit derived ingredients for the dietary supplement, functional foods, animal feed and nutrition, personal care and cosmetics, and oral health industries. Specializing in cranberries, DBS' Fruitaceutical[™] products are rich in natural bioflavonoid complexes, which provide manufacturers with powerful antioxidant, antimicrobial, and nutritional properties, and a natural colorant for a broad variety of applications. DBS' powders, extracts, and oils offer cost-effective and natural options to enhance the taste, color, function, and nutritional content of products.

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