

## Edible Wraps

*Protein-based coatings preserve freshness*

**Y**ou can say “so long” to soggy strawberries, or any fresh or dried fruit that’s used in a frozen dessert for that matter. Quebec-based BioEnvelop Technologies Corporation has perfected a plant protein based edible coating solution that preserves fruit during and after freezing. A U.S.-based baking company will be using this technology, called Bari-Kad, to coat fresh strawberries placed on the upper crust of pies before freezing.

The Bari-Kad gel prolongs shelf life and promotes the use of fresh fruit by preventing freeze-thaw damage. It also prevents humidity transfer and is highly resistant to breakage. It is also non-allergenic. The gel can also be combined with sugar to act as a glaze on baked goods, providing additional flexibility for taste and texture.

While the Bari-Kad technology is not technically packaging, *per se*, it accomplishes what packaging technology is supposed to do: protect the product from oxidation and preserve freshness.

Bari-Kad gel is the result of two years of extensive research and formulation, and the company hopes to have a film version available soon for the meat industry for cooked ham and sausages.

The Bari-Kad technology is an adjunct to BioEnvelop’s first product, Longevita, an edible protein based coating treatment that also prolongs shelf life and prevents humidity transfer in fresh and frozen food products. The edible and 100 per cent biodegradable Longevita coating is made from either milk or soy protein molecules subjected to a patented process that forms a membrane resembling the more traditional plastic film. Both products act as a moisture barrier, mold inhibitor and shelf life extender while protecting product integrity. It can be used in many types of food processing applications, including baked goods, cookies, cereals, energy bars, trail mix and



At left, pies are sprayed with Longevita coating as a moisture barrier, a mold inhibitor and shelf life extender. Top, strawberries show off a coat of Bari Kad, which protects the fruit from freeze-thaw damage.



frozen or fried products. Choosing between the two different products depends on the application (spray or soak). BioEnvelop also manufactures the spraying equipment used to apply the coatings.

Just last fall, the company inked a contract with a New York-based baker for Longevita as a humidity barrier on cookies. Here’s how it works. The Longevita gel is a semi-liquid form that has to be preserved at 4°C. The bio mixture becomes liquid after it’s heated up to 65°C. Then it’s sprayed onto food products and dries rapidly to form an edible, invisible and odourless film. Nagui Naoum, president and CEO of BioEnvelop, says “together, Bari-kad and Longevita are effective coating solutions for a growing range of fresh and processed foods.”

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