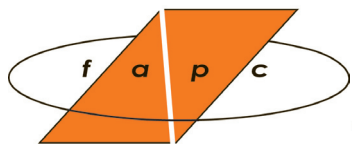


# Food & Agricultural Products Center



## FLASH!!

OKLAHOMA STATE UNIVERSITY™

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## A New Trend: Omega - 3 Fortification of Foods

STILLWATER, Okla. – The Food and Drug Administration approved a “qualified health claim” in September 2004 for reduced risk of coronary heart disease for conventional foods containing omega-3 fatty acids, specifically, eicosapentaenoic acid, or EPA, and docosahexaenoic acid, or DHA.

A qualified health claim for a conventional food must be supported by credible scientific evidence, said Nurhan Dunford, oil/oilseed chemist for the Food & Agricultural Products Center on the Oklahoma State University campus.

The claim states “supportive, but not conclusive research, shows consumption of EPA and DHA omega-3 fatty acids may reduce the risk of coronary heart disease.”

Further information on health benefits and sources of omega-3 fatty acids can be found in a recent FAPC Fact Sheet, FAPC-135 Foods, Health and Omega-3 Oils.

“DHA and EPA are naturally and abundantly present in marine sources,” Dunford said. “Long chain omega-3 fatty acids such as DHA and EPA are made by lower plant forms, such as microalgae, which then are acquired by marine animals through the food chain.”

Scientists at Australia’s Commonwealth Scientific and Industrial Research Organization, or CSIRO, recently announced higher plants producing DHA have been developed.

According to Allan Green, advanced genetics leader at the CSIRO Food Futures, “Commercially available omega-3 enriched crops might be some years away, but they would enable the average consumer to obtain healthier levels of DHA through a wider choice of food.”

The scientific evidence on diverse health benefits of omega-3 fatty acid containing oils has started a trend for new omega-3 fortified foods in both Europe and the United States.

According to the U.S.-based ProductScan Online, there was practically no omega-3 fortified food product in Europe until 2001. At that time 17 launches were announced in the United States.

NutraIngredients.com reported that in Europe during 2002 and 2003, the number of new foods fortified with omega-3s was in the low 20s, but last year 28 new omega-3 fortified foods were launched. So far this year, 16 new foods containing omega-3 fatty acids were reported in Europe.

For example, Nestlé’s “Yoco P’tit Yoco Boire Omega 3,” a strawberry-flavored dairy drink for children, is a new product fortified with omega-3 fatty acids, calcium and vitamin D.

Also, one of the examples of several high omega-3 fortified sliced meat products is a line of sliced pork delicatessen products marketed under the “Pimor Omega 3” banner in Portugal.

Bread, cookies, desserts and ice creams are the other food categories fortified with omega-3 fatty acids, but one of the most interesting products in Europe is an olive product called “La Espanola Te Cuida Aceitunas-Anchoa + Omega 3” marketed by La Espanola Alimentaria Alcoyana in Spain.

“Omega-3 fatty acid rich oils can be highly susceptible to oxidation that deteriorates flavor, increases risk of rancidity and reduces shelf life,” Dunford said. “Flavor of the omega-3 fortified foods is the main obstacle impeding progress.”

Ian Newton of Ceres Consulting in Canada was quoted saying, “Many food companies still don’t believe that fish oils can be put in food and it can still taste good, but there are methods.”

Addition of antioxidants, preparation of emulsions and encapsulation of omega-3 fatty acid containing oils are

some of the techniques that can be used to alleviate stability and flavor issues.

Leatherhead Food, United Kingdom, predicts heart health products will grow 60 percent over the next five years in United States, Japan, Australia and Europe. It is estimated heart health ingredients are about a \$3.6 billion market.

Soy, omega-3 fatty acids, phytosterols, fiber, vitamins C and E, folic acid and potassium are the leading ingredients used for food fortification.

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