Something fishy about omega-3?

6/2/2005 **- The market for foods fortified with these fatty acids is growing fast, but *caveat emptor*: not all omega-3 is created equal. *Jess Halliday* asks whether consumers are getting a good deal.**

Ian Lucas, vice president, marketing and new product development at Ocean Nutrition Canada, thinks not. He explained to NutraIngredients-USA.com that EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid), usually derived from fish oils, are the most bioavailable forms of omega-3 for humans. ALA (alpha-lipoic acid), from flax, is a precursor to DHA and must be converted by the body before it can be used.

Whereas EPA and DHA are 20- and 22-chain chain carbons respectively, ALA is an 18-carbon. The conversion process is the elongation of the carbon chain, and some of the benefit is lost along the way.

Studies have shown that humans glean only two to five percent of the DHA from ALA that they would though consuming the same quantity of DHA in the first place, depending on amounts of omega-6 and long chain polyunsaturated fatty acids in the diet.

"The daily recommendation is 500-1000 mg of EPA/DHA a day, but it is almost impossible to get this from a flax-based source," he said.

According to Productscan, 150 new products containing omega-3 were launched in the USA and Canada in 2004. Details on the type and origin of the fatty acid in each were not available from the market researcher, but Lucas said he believes that the majority of omega-3 products on the market contain ALA.

The omega-3 foods market was certainly given a boost in September 2004, when the FDA approved the health claim that long-chain omega-3 fatty acids may help reduce the risk of heart disease.

As of May 31, omega-3 product launches so far this year numbered 109. If launches continue at the same rate for the next seven months, by year end the category will have grown 74 percent over 2004.

But the health claim relates only to EPA and DHA, not ALA. Whilst products containing just ALA may not carry the health claim on the label, they may truthfully state that they contain omega-3.

Omega-3 has entered consumer consciousness as a generic term, so by association ALA-containing products are perceived as being just as beneficial as those fortified with EPA and DHA.

So why, if science has proved DHA and EPA to be superior, do formulators continue to opt for ALA?

A spokesperson for Bioriginal, which markets both ALA and DHA, said that the attraction of ALA lies partly in its vegetarian source, making it suitable for a broader consumer base.

"ALA is also more stable than fish oil, since it is not as highly unsaturated," he said.

ALA's non-fishy origin means that formulators can avoid taste and smell issues, which have previously hampered attempts to use DHA and EPA in foods.

Even so, ingredients companies have come up with innovative solutions to the fishy issue, which means it need not present a problem.

Bioriginal's fish oils are molecularly distilled, which Bioriginal says helps lessen the taste and smell, and the company has also developed flavored oils to match that of the finished product.

Ocean Nutrition Canada has come up with a microencapsulation technique, which has led its Meg-3 fish derived oils to be used in fortified bread products from The Baker and Arnold Foods Company which launched in the US in 1Q 2005.

But Martek Biosciences' has overcome the problem by by-passing fish altogether and sourcing its omega-3 from microalgae instead. With this, Martek has wooed one of food industry's biggest names, with the signature of a non-exclusive license agreement with Kellogg in February, which may see its branded ingredient showing up on cereal boxes by the middle of next year.

Lucas maintains that more efforts are needed to educate consumers about the different omega-3 options available to them, which will enable them to make an informed choice based on their diet preferences and nutritional needs.