Clinical Applications

- Cardiovascular Health Including Blood Pressure, Lipids and Clotting
- Reducing Inflammation of Joints, Skin, Other
- Reducing Back and Neck Pain
- Support for Mental Health/Behavior
- Support for the Reduction of Allergic-type Response
- Glucose and Insulin Homeostasis

OmegaPure 300 EC™, OmegaPure 600 EC™ and OmegaPure 780 EC™, among XYMOGEN®’s exclusive line of ArcticOils® are pharmaceutical grade, enteric-coated, ultra-pure fish oils. These molecularly-distilled oils provide the respective milligrams of omega-3 essential fatty acids per softgel, permitting dose flexibility. Independent third party assays document freshness and purity of every batch.

Discussion

At the same time as the media increases consumer awareness of the importance of fish oils, manufacturers face the challenge of eliminating heavy metals and PCBs. The industry-leading technologies used in the preparation of XYMOGEN®’s ArcticOils® surpass all national and international standards for environmental pollutants, including dioxins, PCBs, pesticides and heavy metals, including mercury.

XYMOGEN®’s OmegaPure™ oils are processed through special molecular distillation. Molecular distillation is a process commonly used to purify and concentrate fish oils. In this process the fish oil is broken down into its basic molecular components and separated by molecular weight. Due to varying molecular weights specific components can be removed or concentrated to the oil. This ensures that contaminants can be reduced to levels far below industry standards. It also allows the manufacturer to increase the concentration of active ingredients. For example, an 18:12 oil can be concentrated through molecular distillation to produce a 30:20 product as in the case of our OmegaPure 600 EC™.

Traditional molecular distillation technology separates contaminants from the oil through evaporation off a high temperature surface. Not all molecular distillation systems are the same. Below are further details about the systems employed for each of these ArcticOils.

Processing all three fish oil formulas begins with rigorous care and control of the starting raw materials (non-GMO sardines, mackerel, anchovies) to assure optimum oil quality. The oils are distilled in a controlled, pristine vacuum environment to minimize distillation temperatures. The exposure time even to these lower distillation temperatures is tightly controlled and uniform resulting in levels of impurities well below the industry standards.

The technology employed for the OmegaPures 600 EC™/780 EC™ meets special Molecular Distillation Standards: As this oil is a concentrated source of omega-3s, our manufacturer goes above and beyond the traditional purification methods to ensure its safety. This is accomplished by:

- A triple phase molecular distillation purification process to maximize purity while concentrating the EPA and DHA polyunsaturated fatty acids
- Ensuring consistency in contaminant removal and therefore purity levels through uniform processing times
- Reducing the evaporation stage to half the time of traditional systems to drive down the oxidative risk

The proprietary technologies used in the manufacture of OmegaPure300 EC™ and OmegaPure600 EC™ are in accordance with pharmaceutical standards that assure safe, consistent fish oils that exceed Council for Responsible Nutrition (CRN) Monograph standards and meet all international standards for oil safety including WHO, Prop 65, and more. They are third party tested according to AOCS (American Oil Chemical Scientists) international protocols to ensure purity and potency.
The EPA and DHA present in fish oils can be concentrated either as free fatty acids, ethyl esters or reconstituted triglycerides. The debate on the comparative bioavailability of EPA and DHA as triglycerides versus ethyl esters is not yet settled. However, the physiological responses are similar when these fatty acids are administered over a week either as ethyl esters or triglycerides. OmegaPure300™ is the triglyceride form and exceeds CRN standards. The OmegaPures 600 EC™/780 EC™ are the ethyl ester form, guaranteed to exceed the industry standards set by the CRN Monograph.

The International Society for the Study of Fats and Lipids made the following suggestions for dosing for infants, children and lactating women in 2002 and updated the adult recommendation in 2004.

<table>
<thead>
<tr>
<th>Category</th>
<th>Weight</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants (1-18 months)</td>
<td>0-15 lbs</td>
<td>32 mg/lb EPA* + DHA</td>
</tr>
<tr>
<td>Children (1.5 -15 yrs)</td>
<td></td>
<td>5 mg/lb EPA + DHA</td>
</tr>
<tr>
<td>Adults (15-100 yrs)</td>
<td></td>
<td>500 mg EPA + DHA</td>
</tr>
<tr>
<td>Lactating Women</td>
<td></td>
<td>300 mg DHA/day</td>
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</table>

It takes 2 gm/day of DHA supplementation for a month to saturate the plasma and three to six months of supplementation to saturate the tissues. Concentrations increase in breast milk within less than a week of DHA supplementation. Omega-3 fatty acids must be consumed regularly for maintenance of good health and prevention of disease.

## References

9. Molecular Distillation Reference Sheet. Bioriginal Food & Science Corp. Saskatchewan, CA

### Precautions:

Avoid if allergic to any ingredient(s). Fish oils may be associated with loose stools and abdominal discomfort in some patients. They may also increase the need for antioxidants. The OmegaPure™ oils contain 10 IUs of vitamin E for added antioxidant protection.

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

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