

# OmegaPure Krill™

## Omega-3 Oil from Sustainable Antarctic Krill



Available in 60 fish gelatin softgels

### Discussion

OmegaPure Krill™ contains K•REAL® krill oil. Krill oil's uniqueness lies in its composition. Unlike fish oil, krill oil is rich in phospholipids. Research suggests that this special composition allows the omega-3s to be better absorbed into red blood cells and by target organs—such as the heart, brain, and liver—compared to fish oil. K•Real krill oil is produced using a multi-stage oil (MSO®) extraction process that preserves the natural nutrient profile of krill oil while removing spoilage components, such as trimethylamine, total volatile nitrogen, and other oxidative elements and derivatives. The purity of K•Real combined with its phospholipid composition prevents the “fishy burps” associated with some fish oils.\*

#### Antarctic Krill (*Euphausia superba*)

Krill, a coldwater marine crustacean, is a rich source of omega-3 EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid). Krill is considered to be stable and relatively resistant to oxidation, unlike other sources of polyunsaturated fatty acids (PUFAs). Krill's stability is attributed to its antioxidant content, which includes vitamin E and astaxanthin.<sup>[1]</sup> K•Real krill oil is extracted from krill biomass supplied only from vessels and facilities monitored by members of the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR), and OmegaPure Krill is five-star IKOS (International Krill Oil Standards) certified, which ensures the highest quality.

#### Omega-3 Fatty Acids

EPA and DHA, conditionally essential omega-3 fatty acids, have been extensively studied for their positive effects on cardiovascular health, cognitive integrity, immune function, and the body's production of arachidonic acid-derived eicosanoids.<sup>[2,3]</sup> Research suggests that serum levels of EPA and DHA are inversely associated with cardiovascular health. In this regard, it is appropriate to note that the omega-3 index (a measurement of EPA and DHA in erythrocyte membranes) has become recognized as a biomarker of cardiovascular health.\*<sup>[4,5]</sup>

#### Phospholipids

Considered the building blocks of healthy cells, phospholipids help maintain cell membrane fluidity and function. The phospholipid form of EPA and DHA is easily recognized, integrated, and utilized by the body's cells. The major phospholipid in OmegaPure Krill is phosphatidylcholine, which is highly concentrated in the heart, brain, liver, and kidneys.\*<sup>[6]</sup>

## Clinical Applications

- » Provides a Highly Absorbable, Phospholipid Form of Omega-3 EPA and DHA\*
- » Promotes a Healthy Cytokine Balance in the Body\*
- » Helps Maintain a Healthy Omega-3 Index\*
- » Supports Healthy Cell Membrane Fluidity\*
- » Supports Normal Blood Lipid Metabolism\*
- » Supports Cardiovascular Health\*
- » Supports a Healthy, Comfortable Response to Menstrual Cycle Fluctuations\*

*OmegaPure Krill™ features K•REAL® Antarctic krill oil, which provides the omega-3 fatty acids (EPA and DHA) attached to phospholipids as well as to triglycerides. Clinical testing suggests that this molecular composition absorbs into red blood cells, reduces the n-6:n-3 PUFA ratio, and increases the omega-3 index more effectively than fish oil. Krill oil is also naturally complexed with astaxanthin, which provides powerful antioxidant activity and helps stabilize the oil.\**

#### Astaxanthin

Both animal and clinical research suggest that astaxanthin, a red-orange member of the carotenoid family, supports antioxidant mechanisms and helps promote a healthy cytokine balance in the body.<sup>[7]</sup> Krill is recognized as a rich source of astaxanthin, which not only provides health benefits, but also serves to stabilize the krill oil.\*<sup>[1,8]</sup>

#### Krill Oil Research

In addition to a plethora of animal studies, krill oil has been used in several human clinical trials, and research consistently suggests that it has higher bioavailability than fish oil, supports cardiovascular health, and positively influences the production of arachidonic acid-derived eicosanoids.<sup>[8-14]</sup> For instance, a double-blind crossover trial compared uptake of EPA/DHA from krill (in phospholipid form) to uptake of two forms of fish oil (ethyl esters and reesterified triacylglycerides). Results suggested that krill oil had superior bioavailability and promoted the highest incorporation of EPA and DHA into plasma phospholipids.<sup>[13]</sup> A randomized, double-blind, parallel-arm trial of 76 subjects indicated that 2 g/day of krill oil significantly increased plasma EPA and DHA levels and was well-tolerated.\*<sup>[10]</sup>

#### K•REAL Research

In a double-blind, placebo-controlled, crossover design, the effects of krill oil (3g/d) on plasma and red blood cell fatty acid profile was studied in healthy volunteers. Results indicated that K•Real krill oil more effectively increased plasma and red blood cell EPA and DHA concentrations, decreased the total n-6:n-3 PUFA ratio, and increased the omega-3 index compared to fish oil. These findings suggest that the bioavailability of krill oil omega-3 PUFA might be more pronounced than that of fish oil, which is likely due to the structural differences between these two marine oils. Krill oil was well tolerated with no adverse events.\*<sup>[14]</sup>

In a randomized, double-blind controlled crossover trial involving 47 participants, krill oil supplementation was shown to support cardiovascular health by improving endothelial function and supporting healthy blood lipid metabolism. Participants presented improved endothelial function after taking krill oil daily for four weeks compared to participants taking olive oil. During the additional 17-week supplementation period, 34 of the participants showed a statistically significant improvement in endothelial function and lipid metabolism when compared with their respective baseline measures.\*<sup>[15]</sup>

\*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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## OmegaPure Krill™ Supplement Facts

Serving Size: 2 Softgels

	Amount Per Serving	%Daily Value
Calories	10	
Total Fat	1 g	2%†
K-REAL® Krill Oil	1.65 g	**
Phospholipids	540 mg	**
Total Omega-3 Fatty Acids	363 mg	**
EPA (eicosapentaenoic acid)	165 mg	**
DHA (docosahexaenoic acid)	99 mg	**
Astaxanthin (from microalgae)( <i>Haematococcus pluvialis</i> )	2 mg	**

†Percent Daily Values are based on a 2,000 calorie diet.

\*\* Daily Value not established.

**Other Ingredients:** Softgel (tilapia fish gelatin, vegetable glycerin, and purified water), sorbitol, natural mixed tocopherols, and ascorbyl palmitate.

**Contains:** Crustacean shellfish (krill) and fish (tilapia [source of fish gelatin])

K-REAL® is a registered trademark of Enzymotec Ltd.

**DIRECTIONS:** Take two softgels in the morning, preferably after breakfast, or as recommended by your healthcare practitioner. Do not crush or chew softgels.

Consult your healthcare practitioner prior to use. Individuals taking medication should discuss potential interactions with their healthcare practitioner, especially if you have coagulopathy or are taking an anticoagulant. Do not use if tamper seal is damaged.

**STORAGE:** Keep closed in a cool, dry place out of reach of children.

**DOES NOT CONTAIN:** Wheat, gluten, yeast, soy protein, dairy products, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, or artificial preservatives.



IKOS™ certification mark is a registered trademark of Nutrasource Diagnostics Inc.

## References

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Additional references available upon request

All XYMOGEN® Formulas Meet or Exceed cGMP Quality Standards.

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