



## **FREQUENTLY ASKED QUESTIONS**

**The following frequently asked questions and responses are meant for distribution to Marinalg members. Please refer all industry issues inquiries to [info@marinalg.org](mailto:info@marinalg.org). Please refer all media inquiries to Kate Allison (215)790-7816 or [media@marinalg.org](mailto:media@marinalg.org). Please note that highly scientific questions should be deferred to toxicologists.**

### **What is carrageenan?**

Carrageenan is a soluble fiber derived from red seaweed and a natural food ingredient that has been used for hundreds of years in the West and probably hundreds of years earlier in Asia. Carrageenan is a high molecular weight polysaccharide consisting of galactose sulfate and anhydrogalactose sulfate units. It is a naturally occurring, non-synthetic substance. The farmed seaweed industry estimates that 210,000 metric tons of seaweed is harvested globally every year at a value over \$250 million.

### **What are the primary uses of carrageenan?**

Carrageenan is a versatile product, used in a variety of foods, personal care products, pharmaceutical products and dietary supplements. It is used in such products as ice cream and other dairy products, syrups, toothpaste, lotions and hair products. It is often used as a thickening agent much in the same way ingredients such as flour, cornstarch and tapioca are used to thicken or bind other ingredients. The broad functionality of carrageenan overcomes a range of food issues including fat and sugar reduction, expansion of protein availability, and reduction in food waste through shelf life extension.

### **Is carrageenan safe?**

Overwhelming data from dietary studies, particularly long-term oral feeding studies, on the consumption of carrageenan for the past 40 years has shown carrageenan is a safe ingredient. Regulatory authorities around the world including those in the United States, Europe, China, Japan and Brazil have found carrageenan safe for use in food.

These groups have determined there is no need to set an upper limit on the amount of carrageenan a human can safely consume when carrageenan is used at the level needed to achieve its intended effect in food (i.e. stabilizer, thickener). The International Agency for Research on Cancer has found carrageenan to be non-carcinogenic.

### **Can you explain how carrageenan is processed?**

Carrageenan is derived from red seaweed that is cultivated in an environmentally friendly and sustainable manner. Most red seaweed is produced in Southeast Asia by small family farms without the need for fertilizer, arable land or fresh water. The process for making carrageenan is mild and preserves the functionality already in the seaweed. Seventy to ninety-five percent of the rearrangement of the carrageenan backbone occurs in the seaweed during its lifecycle. The



effect of processing only increases the rearrangement already occurring in the plant to at least ninety percent and allows carrageenan to be processed economically and with minimal waste.

**Are carrageenan and poligeenan the same thing?**

No. Poligeenan is a substance that requires aggressive processing using strong acids and high temperatures over an extended period of time compared to the minimal processing required to release and purify carrageenan.

**Is there poligeenan in food?**

Poligeenan is not a food additive and has no functionality in food.

**Does carrageenan turn into poligeenan during digestion?**

Carrageenan does not turn into poligeenan during digestion, as the necessary conditions for poligeenan production (low pH, temperatures in excess of 175°F, extended timeframe) do not exist in the human digestive tract. The Joint FAO/WHO Expert Committee on Food Additives (JECFA) concluded that if carrageenan did turn into poligeenan during digestion, “This would be detected in (animal) feeding studies” – yet no such effect has been detected.

**Does carrageenan cause inflammation of the digestive tract (colitis, Crohn’s disease, etc.)?**

Carrageenan does not cause inflammation of the digestive tract (colitis, Crohn’s disease, etc.), and studies that assert a connection between ingesting carrageenan and gastrointestinal inflammation have been misinterpreted due to flawed methodology and comparisons.