

## **DO CARRAGEENANS CONTAIN MSG? NO, AND HERE IS WHY**

Monosodium glutamate, or MSG, can cause health problems when used to excess. However, despite claims made on various websites, carrageenans are not a source of MSG.

This confusion may have occurred because carrageenans are derived from seaweeds, and one of the most important natural sources of MSG is the seaweed kombu. However, carrageenan is extracted from red seaweeds, which contain much less MSG than kombu, a brown seaweed. In addition, any MSG that may be present in the seaweed is washed out during the carrageenan extraction process.

To prove that carrageenan is not a source of MSG, Marinalg tested two of the carrageenans most often used in food products. These tests were carried out by the independent testing company, [Eurofins](#). The two products that were tested are both strong gelling agents: the refined carrageenan E407, and the lesser-refined carrageenan E407a, also known as PES.

MSG is a sodium salt of glutamic acid, a naturally occurring amino acid. Eurofins found that the sample of E407 contained less than 10mg/kg of glutamic acid in total, whether as the free acid, bound into proteins or as the monosodium salt. 10 mg/kg is the limit of detection for the best available testing method, so for all practical purposes undetectable amounts of glutamic acid in its various forms were present

Levels of MSG and free glutamic acid were also below 10mg/kg in the PES sample; it did, however, contain 0.22% of bound glutamic acid. It is well known that PES contains small amounts of algal cellulose and protein in addition to the carrageenan. Eurofins found that all of this glutamic acid had been present in the seaweed in bound form in algal protein.

When humans consume glutamic acid that is bound in proteins, it is digested in the stomach and lower intestine. The body then uses the glutamic acid that is freed in this way as part of the normal process of metabolism, or it is discarded as waste. The body does not store excess glutamic acid ingested from protein. On the other hand, directly ingested MSG is absorbed rapidly and is not excreted as fast, and this is what causes the negative health effects associated with excessive consumption of MSG.

Carrageenans and PES contain less than detectable amounts of free MSG. Health problems have been attributed to the ingestion of several grams of free MSG at a time. Carrageenans contain less than 10mg of MSG in every kilogram. Very small amounts of carrageenans are used in any given food product. Therefore, they cannot contribute to the negative health effects of MSG consumption.

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