

38580 Irish moss

engl.: Irish moss, pearl moss

french: mousse d'Irlande

other names: Carrageen, Carrageen, Pearl moss

Irish moss is not, as the name suggests, a moss, but an alga called *Chondrus crispus*, more rarely *Gigartina mamilliosa*, of the florid family. *Chondrus crispus* is the better product. It grows as a 5 to 15 cm plant in the Atlantic Ocean, mainly off the coasts of Ireland, France and New England, and is "raked" at low tide. Carrageenan does not occur in the Mediterranean or Baltic Seas. A designation as a lichen, "Lichen Carrageen" is botanically incorrect.

Irish moss contains mainly 80% mucilage, which is why it is used in medicine as a remedy for coughs. Methylpentose and glucose groups are present, as well as galactan, fructosan and pentosan. Starch should not be present in the mucus, i.e., a sample should not be stainable with iodine.

In cold water, the algae swell back to their natural size; in hot water, mucilage is released. The mucus can be used as a natural adhesive. A decoction is made by pouring hot, but not boiling, water over the material. Then soda dissolved in hot water is added. In this still hot form, the mucilage extract can be filtered, but not later, because the decoction begins to gel as soon as it cools.

Carrageenan is an important substitute for gum and is used in textiles as a finishing agent, in paper manufacture, in the production of straw and felt hats or for clarifying beer, wine or honey. It is also used as a color base for marble papers or as a binder for water-based paints.

There are several instructions in the literature on its use as a marbling base. Boeck describes the handling of Carrageenmose as follows:

"To make the ground, many use carrageen moss decoction, for which purpose only selected pure and strong moss is suitable. Carrageen moss (*Sphaerococcus crispus*), also called Irish knotweed, is leaf-like branched, appears hard, horn-like, pale brownish, yellowish or reddish white in 5 to 18 centimeter long tufts finely curled at the ends. This moss is very common on the coasts of Ireland and in the North Sea. The decoction is made in the following simple way: 10 grams of moss are put in a pot, which must not be used for any other purpose, 1 liter of soft water, river or distilled water is poured on it and put on the fire. Some take the following ratio: 40 grams of moss and 3 liters of water. The water is boiled, stirring frequently, until it ripples a few times, after which the decoction is left to stand for a few minutes to stop the water from rippling. Now pour the liquid through a not too narrow fabric, for example through old canvas. The decoction should pass quickly through the filter and at the same time retain all pieces of moss and other impurities. The filtered mass must cool down completely and be stored in a cool, dry place, where it will keep for three to four days. To protect the decoction from spoilage during these days, a pea-sized grain of alum or five to six drops of salicylic acid dissolved in hot water may be added. The ground cannot be kept longer than indicated above and must be poured away after this time, because cuts on old ground do not succeed. It is best to boil the ground the day before use. It is a matter of experience to prepare the ground in such a way that it is neither too thin nor too strong for the marble in question, since an absolutely exact measure cannot be given due to the difference in the quality of the moss: for feather or comb marble, the ground is just right in the consistency just given, while for Turkish marble, up to ¼ liter of cold water is added after complete cooling. To test whether the decoction still has the necessary strength, dip a finger into the solution and slowly pull it out again; if the liquid rises from the finger in the form of a thread about 1 centimeter long, sufficient strength is still present. The ground is too strong if the burst color spreads out at the beginning, but then contracts again strongly. It is too thin if the paint drops spread too far apart.

Old ground becomes watery, whereby the colors easily combine with it and, just like on a too thin ground, run into each other or give pale marble.

It should be mentioned once again that care must always be taken to clean the base before the first color is applied and after the marble has been lifted off, so that neither bubbles nor color residues are visible on the surface. Likewise, frequent stirring of the base is advisable in order to maintain the same consistency in all parts.

Some recommend the addition of psyllium decoction when using Carragheen moss ground."

From: Jos. Phileas Boeck: The Art of Marbling. An instruction and manual for bookbinders, colored paper mills and related businesses. Vienna, Pest, Leipzig 1896, pp. 23-25.

Or:

"In a fat-free pot, 4.5 liters of water as free of lime as possible are brought to a boil. About 1.5 g of borax per liter can be added to the boiling water. This reduces the hardness of the water and at the same time preserves the liquid. Then add 90-100 g of carragheen. When the water has bubbled up a few times, add 1.5 liters of cold water while stirring, which stops the bubbling up and clears the liquid. The ground must be cooled by boiling it for a longer period of time, and it should not be covered while it is hot. 10 to 12 hours later, the sheim is strained through a linen cloth and the clear, amber liquid obtained is left to stand for some time. Only after about a day is the slime base ready for use."

Recipe from: Nedim Sönmez: EBRU Marble Papers. Ravensburg 1992, p. 82