

# Entering the European market for seaweed extracts

As a seaweed extracts exporter to the food industry, you have to comply with mandatory legal requirements. European buyers also have additional requirements that you are advised to follow to succeed in the European seaweed extracts market. Most seaweed extracts, such as carrageenan and agar-agar (also known as just 'agar'), are used in the food and beverage sector.

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## 1. What requirements must seaweed extracts comply with to be allowed on the European market?

### What are mandatory requirements?

#### Seaweed extracts safety - European General Food Law, traceability, hygiene and control

As a seaweed extracts exporter hoping to supply the food industry, you must demonstrate it is safe for use. You must therefore be compliant with the [General Food Law](#) of the European Union (EU), which ensures the safety of your seaweed extracts. Refined carrageenan is approved as E407 and semi-refined carrageenan is approved as E407a, according to [EU regulation 2012/231/EU](#), the Code of Federal Regulations and the Food Chemicals Codex standards. Agar (E 406) is authorised as a food additive in the European Union (EU) in accordance with Annex II to Regulation (EC) No 1333/2008.

For more information on traceability, hygiene, control and contamination, see the [CBI Study on buyer requirements](#). There, you can find more information on specific regulations that deal with food additive safety.

### Contamination

In order for your seaweed extracts to enter the European market and for you to trade on it, you need to prove your extracts are not contaminated, or that any contamination is within levels set by the EU. For food products the EU has set maximum residue levels (MRLs) for pesticides ([EC Regulation 396/2005](#)) and heavy metals ([EC Regulation 1881/2006](#)). You must ensure your seaweed extracts do not contain pesticides or heavy metals in amounts above the levels set by the EU. [Regulation \(EU\) No 231/2012](#) sets purity and contamination standards for seaweed extracts, such as carrageenan and agar-agar, as shown in tables 1, 2, 3 and 4.

Table 1: Purity requirements for carrageenan (E407)

Solvent residues	Not over 0.1% of methanol, ethanol, propan-2-ol, singly or in combination
Viscosity	Not under 5 mPa·s (1.5 % solution at 75°C)
Loss on drying	Not over 12% (105°C, 4 hours)

Sulphates	Not under 15% and not over 40% in dried form (as SO <sub>4</sub> )
Ash	Not under 15% and not over 40% determined in dried form at 550°C
Acid-insoluble ash	Not over 1% in dried form (insoluble in 10% hydrochloric acid)
Acid-insoluble matter	Not over 2% in dried form (insoluble in 1% v/v sulphuric acid)
Low molecular weight carrageenan (molecular weight fraction below 50 kDa)	Not over 5%
Arsenic	Not over 3 mg/kg
Lead	Not over 5 mg/kg
Mercury	Not over 1 mg/kg
Cadmium	Not over 2 mg/kg

Source: eur-lex.europa.eu

Table 2: Microbiological requirements for carrageenan (E407)

Total plate count	Not over 5,000 colonies per gram
Yeast and moulds	Not over 300 colonies per gram
<i>Escherichia coli</i>	Absent in 5 g
<i>Salmonella spp.</i>	Absent in 10 g

Source: eur-lex.europa.eu

Table 3: Purity requirements for agar (E406)

Loss on drying	Not over 22% (105°C, 5 hours)
Ash	Not over 6.5% in anhydrous form determined at 550°C

Acid-insoluble ash (insoluble in approximately 3N Hydrochloric acid)	Not over 0.5 % determined at 550°C in anhydrous form
Insoluble matter (after stirring for 10 minutes in hot water)	Not over 1.0 %
Starch	Not detectable by the following method: to a 1-in-10 solution of the sample, add a few drops of iodine solution. No blue colour is produced
Gelatin and other proteins	Dissolve about 1 g of agar in 100 ml of boiling water and allow to cool to about 50°C. To 5 ml of the solution add 5 ml of trinitrophenol solution (1 g of anhydrous trinitrophenol/100 ml of hot water). No turbidity should appear within 10 minutes
Water absorption	Place 5 g of agar in a 100 ml graduated cylinder, fill to the mark with water, mix and allow to stand at about 25°C for 24 hours. Pour the contents of the cylinder through moistened glass wool, allowing the water to drain into a second 100 ml graduated cylinder. Result obtained should be under 75 ml of water
Arsenic	Not over 3 mg/kg
Lead	Not over 5 mg/kg
Mercury	Not over 1 mg/kg
Cadmium	Not over 1 mg/kg

Source: eur-lex.europa.eu

Table 4: Microbiological requirements for agar (E406)

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## Classification, Labelling and Packaging (CLP)

The EU's [Classification, Labelling and Packaging \(CLP\) Regulation](#) (EC Regulation 1272/2008) identifies hazardous chemicals and informs users about their hazards, using standard symbols and phrases. The CBI study on buyer requirements provides details on the CLP Regulation.

As an exporter, you must determine whether your seaweed extract is hazardous. Check and regularly consult the [European Chemicals Agency \(ECHA\)](#) database to determine if your seaweed extract is hazardous. If your seaweed extract is hazardous, use the appropriate special packaging and corresponding warning labels. Carrageenan is [classified as hazardous](#) by the ECHA, and you must display the two hazard labels, seen in Figure 1, on its packaging.

Figure 1: Hazard labels for carrageenan



If you export [European Union organic certified](#) seaweed extract, you must comply with the EU's labelling requirements. Therefore, in addition to the EU organic logo, you must display the code number of the control body, and also state where the agricultural raw materials have been farmed that compose the product.

### Tips:

See the [CBI study on buyer requirements](#) for natural food additives. This gives more information on the mandatory requirements you need to adhere to when exporting natural food additives to Europe.

Refer to [Regulation \(EC\) No 1333/2008](#), which has complete lists of approved food additives (Union List) for use in food categories (Annex II), and in ingredients such as additives, enzymes, flavourings and nutrients (Annex III). The regulation provides a general framework for putting food additives on the European market.

Check the [European Chemicals Agency \(ECHA\)](#) database, and continue to do so regularly, to determine if your seaweed extract is hazardous or could become hazardous. Carrageenan is currently classified as hazardous; you must therefore display the two hazard labels seen in Figure 1 on its packaging.

## What are additional requirements that buyers often have?

### Quality requirements

The [Codex Alimentarius](#) outlines conditions under which seaweed extracts can be used in all foods. Although its standards are not mandatory, countries are encouraged to incorporate the standards in their national legislation. Exporters of seaweed extracts, such as carrageenan and agar, should refer to these guidelines when exporting to the European market.

According to the standards, food additives should have be food-grade quality and comply with the specifications of identity and purity recommended by the Codex Alimentarius Commission. There are also national standards related to quality standards for seaweed extracts. For example, Indonesia introduced Standar Nasional Indonesia that pertains to quality standards for dry seaweed and related products.

European buyers can have different quality requirements depending on the type of extract and its application. Batches are tested for adulteration and consistency. You should therefore always provide European buyers with a standardised high-quality product for all orders and for each container. European buyers may require certification concerning quality standards. These include [Food Safety Certification \(FSSC 22000\)](#), [International Food Safety \(IFS\)](#), [Safe Quality Food \(SQF\)](#) and [British Retail Consortium \(BRC\)](#) certification.

### Tips:

Make sure your seaweed extract is not adulterated with any other chemicals. Provide European buyers with a product of the same quality consistency for every order. Follow international and national quality standards for seaweed products and extracts.

Develop detailed knowledge about your product, such as information about its origin, processing and qualities. Make sure you can provide relevant quality certification to back up your claims when approaching European buyers.

Identify relevant food safety management standards for your seaweed extract from the [ITC's Standards Map](#).

## Documentation

European seaweed extract buyers appreciate exporters providing them with well-structured and organised product and company documentation. Consider doing this, since it gives you an advantage when trying to establish yourself on the European market. This will help develop long-lasting trading relationships with European buyers. It will also make you look organised and well prepared to European buyers.

European buyers of seaweed extract usually want exporters to firstly provide them with Safety Data Sheets (SDS), containing a:

- product description
- classification
- hazard identification
- information on safety measures.

Secondly, European buyers want to be provided with Technical Data Sheets (TDS) containing:

- a product description
- product classification
- quality analysis
- information on applications
- certificates.

European buyers also request a Certification of Analysis (CoA) which contains analytical data from the product delivered. This should include the:

- Certification of Analysis matches;
- data mentioned in the TDS;

- pre-shipment sample that was approved by the buyer; and
- the contractual agreements with the buyer.

Consider acquiring SDS, TDS and CoA for your seaweed extract and have them ready for European buyers. If you already have them, be sure to inform European buyers when you approach them.

### Tips:

See the [CBI study on how to prepare technical documentation](#) for natural food additives, which your seaweed extracts falls under.

Make sure you keep your documentation up to date. Review these examples of a [Safety Data Sheet](#) and a [Certificate of Analysis](#) for carrageenan, and this example of a [Technical Data Sheet](#) for agar-agar.

## Labelling and packaging

An additional requirement for seaweed extracts is waterproof packaging, since they will attract moisture. You should use plastic (polypropylene) or paper bags with a polyethylene lining. This kind of packaging protects seaweed extracts from moisture and prevents a decline in product quality.

### Tip:

Consider packaging your seaweed extract in appropriate materials before you export. Failure to package your seaweed extract is likely to cause a decline in its quality, potentially causing a major loss as an exporter.

## Payment terms

The type of payment terms depends on various factors, such as the order volume and how long you have been in a business relationship together. Payment methods such as letters of credit and cash in advance are used. Cash in advance is used for lower volumes.

The [letters of credit payment method](#) is usually used for larger orders. Letters of credit (LC) are considered to be one of the safest payment terms. Once the business relationship is established, other payment methods can be used as well, such as open account and documentary collections. It is also common to use combinations of various payment methods.

### Tips:

Make sure you negotiate payment methods for your seaweed extracts that meet your needs and do not put your business at risk.

Be flexible when negotiating the payment methods with potential European buyers.

See the CBI study for [organising your export of natural food additives to Europe](#). This study provides guidance on available payment terms used in this sector.

## Delivery terms

When agreeing delivery terms with European buyers, you must carefully consider the three important factors of delivery time, volume and cost. Failure to meet agreed delivery terms can result in the end of your trading relationship with European buyers.

1. **Delivery time:** As an exporter, you need to understand that European buyers prefer shorter delivery times. Air cargo is usually faster than sea freight. Air freight is also more reliable with regard to on-time delivery. It is important to note that due to the global COVID-19 pandemic [delivery times are likely to be longer](#); reasons for this include mandatory quarantine measures and restrictions on the movement of goods.
2. **Delivery volume and/or quantity of order:** The volume of your order is an important factor to consider when choosing a mode of transport. Larger quantities are often cheaper to ship by sea. With lower volumes, air freight can be less expensive, as margins are smaller.
3. **Cost of delivery method:** Sea freight is estimated to usually be 4-6 times cheaper than air freight. This applies to larger volumes. It is unlikely that the price of your cargo will increase substantially if you increase the volume. Note that the COVID-19 pandemic has increased the cost of air freight; this is likely to change once passenger flights are fully operational.

### Tips:

Be open to negotiating discounts with your potential buyers. This may help you establish long-term partnerships with European buyers.

Visit the [Freightos website](#) to find out more information about freight costs. This will help you choose a delivery method.

Get to know and learn how to use [Incoterms](#). This knowledge will help you when negotiating payment and delivery terms with your potential buyers.

Before agreeing delivery terms with European buyers, speak to your logistics provider about what COVID-19 means for you when exporting to the European market.

## What are the requirements for niche markets?

### Environmental and social sustainability

There is growing consumer demand in the European market for products which have been produced under environmentally and socially sustainable circumstances. There is also growing demand from European buyers seeking to buy sustainable seaweed extract. In 2017 the Marine Stewardship Council and Aquaculture Stewardship Council (ASC-MSC) launched a new [standard and certification scheme](#) for environmentally sustainable and socially responsible seaweed production to meet this demand. You should consider acquiring ASC-MSC certification, as it can help you in accessing the European market.

Other certification schemes such as [EU organic certification](#) or for the [FairForLife](#) standard are possible, but they are not so common. Conventional seaweed extracts may be used in organic foods under the EU organic regulations.

### Tips:

Consider acquiring certification to prove your seaweed extract is produced according to certain environmental and/or social standards. This could, for example, be the ASC-MSC standard and certification scheme for environmentally sustainable and socially responsible seaweed production. It will help you in accessing the European market.

Refer to the [ITC Standards Map](#) for a comprehensive overview of certification schemes in the sector.

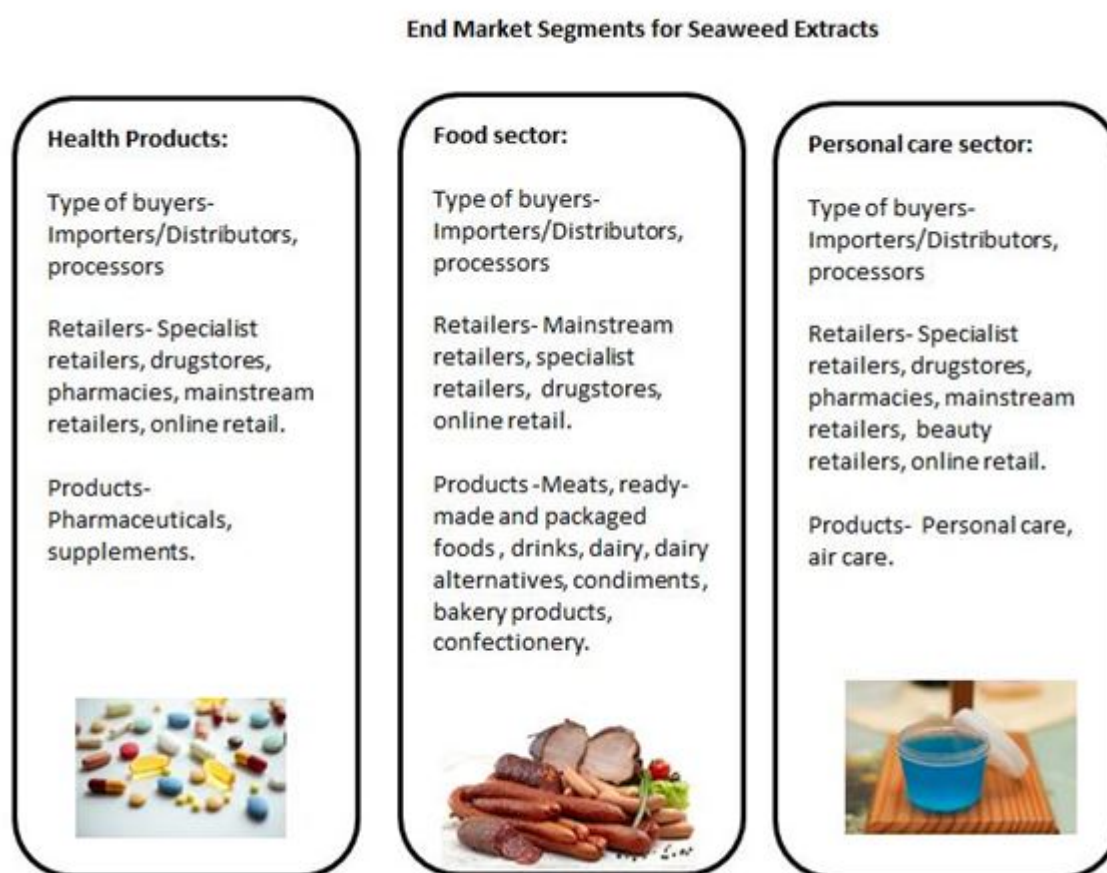
## 2. Through what channels can you get your seaweed extracts on the European market?

The commercial production of seaweed extract, such as carrageenan and agar-agar, is spread across countries in Asia, Africa, North America and Latin America, as well as in Europe. Carrageenan and agar-agar have a wide range of applications. However, their main applications are in the food industry because of their functional properties.

### How is the end market segmented?

The European market for carrageenan and agar-agar can be segmented by end-user industries. These include the health products sector, food & drink sector and personal care sector.

Figure 2: Market segmentation of the seaweed extracts market



Source: Various

### Food and drinks industry

The [global carrageenan market](#) is expected to grow at a healthy rate and to be worth USD 1.25 billion in 2024. Europe has the fastest growing market for carrageenan. The [global agar-agar market](#) is predicted to reach USD 362 million by 2025, with [Europe expected to experience strong growth](#) until then. It is estimated that around half of what is traded in Europe on the carrageenan market and about 35-40 percent of that on the agar-



agar market goes to the food industry.

Carrageenan and agar-agar are used in the food and drinks industry due to their wide range of functional properties. Carrageenan and agar-agar's functional properties include their acting as a thickener, stabiliser and gelling agent. Carrageenan and agar-agar are also used by the food and drinks industry because they are an alternative to gelatin, an animal-derived ingredient.

There are three types of carrageenan and each type is suited to a different range of food applications. Kappa-carrageenan is used in dairy applications and meat products, like hams and sausages. It is also often mixed with locust bean gum and guar gum to produce a soft gel that is often used in ice creams. Iota carrageenan has an elastic consistency. It is mainly used in dairy alternatives, salad dressings and sauces. Lambda carrageenan is used as a thickener and to give beverages, syrups, dairy products, sauces and dressings a creamy texture. It is estimated that the food & drink sector accounts for almost half of the carrageenan and agar-agar demand in Europe.

## Health product industry

About 20-25 percent of carrageenan and agar-agar is used in the health product sector. Carrageenan and agar-agar are used by the health products industry because of their functional properties. Carrageenan's functional properties include it acting as a stabiliser and gelling agent, along with its thermo-reversible property in aqueous solutions. Some of [agar-agar's functional properties](#) include its high gel strength, high solubility and transparency, along with its stabilisation and thickening properties.

## Personal and home care industry

The personal and home care sector account for about 20 percent of the carrageenan and agar-agar market in Europe. Carrageenan is used by the cosmetic and personal care industry because of its functional properties. The [functional properties of carrageenan](#) include its acting as a binder, emulsion stabiliser, film former and hair conditioning agent. Agar-agar is used because of its functional properties, such as its ability to act as a thickener; it is also used because it can [soften and moisturise](#) skin and hair. Air freshener gels and lubricants also contain seaweed extracts.

This study focuses on the use of seaweeds in the food sector.

### Tips:

Familiarise yourself with how the European seaweed market is segmented.

Make sure you educate yourself on the benefits that carrageenan and agar-agar offer to the food sector. Advertise these benefits in your marketing materials and on your website.

## Through what channels do seaweeds end up on the end-market?

Figure 3 shows the export value chain for seaweed extracts, such as carrageenan and agar-agar. The seaweed cultivation for carrageenan and agar-agar production usually occurs at sea, although the raw material can also be cultivated in lakes. There are four major extraction processes used to produce carrageenan: the alcohol precipitation process; gel press/KCl precipitation; Danisco process (PES); and alkali-modified seaweed flour process (AMF). The PES and AMF processes are the most cost-effective because they require lower capital while producing high-quality kappa carrageenan.

To extract agar-agar from seaweed, the following [process](#) takes place. Seaweed is washed, heated for several

hours and left to dissolve in water, with the remaining mixture being filtered to remove residual seaweed. The hot filtrate is cooled, with it then forming a gel which is broken into pieces. Water is then removed from the gel, either by a freeze-thaw process or by squeezing it out under pressure. After this treatment, the remaining water is removed by drying in a hot-air oven. The product is then milled to a suitable and uniform particle size.

To export to the European market, farmers and collectors in developing countries typically go through seaweed extract processors and/or seaweed exporters. This is because they are the next steps in the supply chain in reaching the European food and beverage industry, since they supply importers, distributors and seaweed extract processors. Along with supplying European food and beverage manufacturers, importers and distributors often supply seaweed extracts to European blenders who also supply food and beverage manufacturers.

## **Importers and distributors**

Importers are one of the most popular ways to have seaweed extracts reach the European market. They source directly from seaweed extract processors in developing countries. They have expertise in the global sourcing of natural ingredients, ensuring its quality, documentary and regulatory compliance; they also sell to European food and beverage manufacturers. They may also use agents, but this is less common. Many importers and distributors have long-term partnerships with seaweed extracts processors in developing countries. Examples include [Neupert Ingredients GmbH](#) and [Ceamsa](#).

## **Seaweed extracts processors**

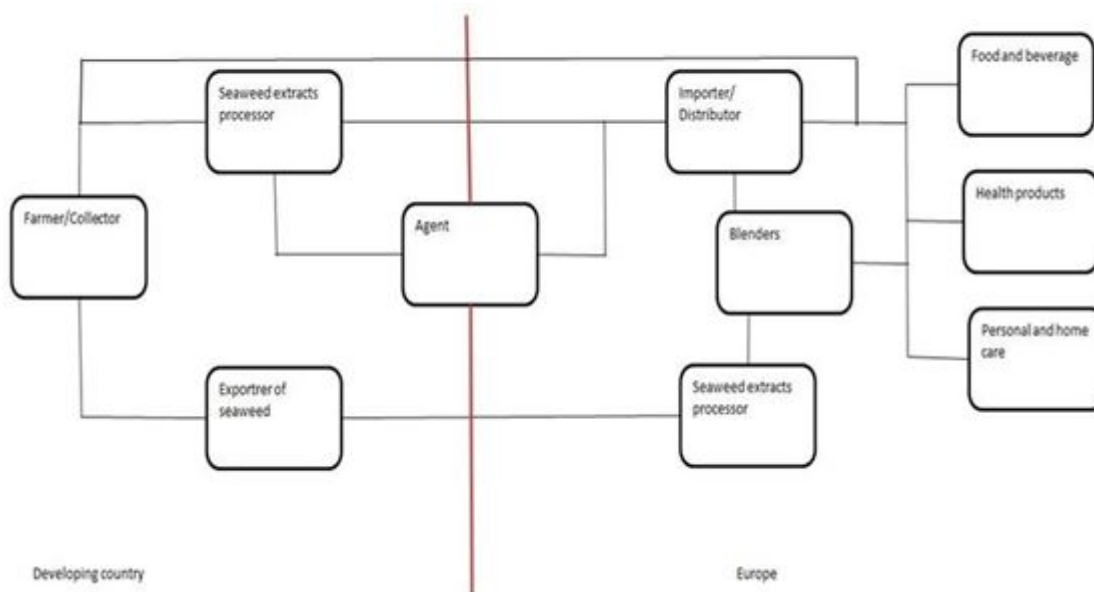
Some seaweed extract production takes place in Europe. However, there is a general shift towards sourcing from developing countries, since production levels are increasing in non-European countries like Indonesia. European seaweed extracts processors source raw materials from exporters in developing countries or they source it from Europe. In Europe, seaweed extract production takes place in countries like Spain and France. [ROKO](#) is an example of a European company that produces seaweed extracts.

Food manufactures also source seaweed extracts directly from manufacturers located in countries where seaweed extracts originate from. However, food manufacturers will have different requirements than those of importers and traders. As a small or medium-size exporter in a developing country, the best channels for you are likely to be European importers and distributors.

## **Agents**

An export agent is a firm or an individual undertaking most of the exporting activities on behalf of an exporter; they usually do this for a commission. Agents can be found in developing countries as well as in Europe. As an exporter in a developing country, you can work with agents who represent and act on your behalf on the European market.

Figure 3: Export value chain of seaweed extracts



Source: Ecovia Intelligence

### Tip:

Visit trade shows in order to connect with European buyers. You can use this opportunity to get contact details and network with any buyers sourcing seaweeds. Examples include [Anuga](#), [Fi Europe & Ni](#) and [BioFach](#).

## What is the most interesting channel for you?

As a carrageenan and agar-agar exporter, importers are your most important channel. Examples of importers and traders are [Roeper](#), [BAK Handelsbetrieb](#) and [AGI](#). Most of the European food manufacturers source their seaweed extracts from importers and distributors. European importers can source varying quantities and are able to provide warehousing facilities. Larger processors, such as [CP Kelco](#), [Cargill](#) and [DuPont](#), have integrated supply chains and source raw materials from growers.

Food manufacturers also source seaweed extracts directly from manufacturers in countries where seaweed extracts originate from. However, food manufacturers will have different requirements than those of importers and traders. For example, food manufacturers may require carrageenan and agar-agar to meet specific compositional requirements, such as with regard to the viscosity level, depending on the food industry segment it will be used in.

### Tips:

Invest in the quality of your products before entering the European market. You must ensure that your seaweed extract complies with international standards and you need to develop your technical dossier.

See the CBI study [9 Tips for finding buyers in the natural food additives sector](#) for useful information and guidance on finding buyers in channels you can enter the European market through. Specifically, importers and distributors, who are your main entry point into the European market.

### 3. What competition do you face on the European seaweed extracts for food market?

#### What countries are you competing with?

Figure 4 and Figure 5 show the largest exporters of agar-agar, mucilages and thickeners with HS Code 130239.

Developing countries successfully exporting seaweed extracts (such as carrageenan and agar-agar) to the European market often share several key strengths which are important to their success. Key strengths shared by countries listed in this section include government support for the local seaweed sector, specifically the carrageenan and/or agar-agar industry, along with improving infrastructure.

#### China

Eurostat data shows that China is the largest exporter of carrageenan and agar-agar to the European market. One of China's key strengths is that it has an established commercial carrageenan processing industry. In recent years, China has continued building new [carrageenan production](#) facilities.

China also has an established commercial agar-agar production and processing industry; for example, China has farms that focus on cultivating seaweed from which agar-agar is extracted. Another major strength is that China is the leading exporter to Europe of both carrageenan and agar-agar.

However, it is likely that the Chinese commercial carrageenan processing industry will face challenges in coming years. The Indonesian Maritime Affairs and Fisheries Ministry is placing [restrictions](#) on the export of raw seaweed this year, in order to increase the added value of Indonesia's seaweed. This will hit China, which is one of its largest importers and processors of seaweed.

China is traditionally one of the biggest producers of seaweed extracts in the world. European buyers see Chinese suppliers as capable of supplying high volumes of carrageenan. China supplies large quantities of kappa carrageenan, both refined and semi-refined. Iota carrageenan is also produced in China. According to industry feedback, the quality of seaweed extracts from China is usually good. Chinese carrageenan is usually cheaper than Indonesian or Philippine carrageenan.

#### The Philippines

According to Eurostat data, the Philippines was the second largest exporter of carrageenan to the European market in 2018. One of the Philippines's key strengths is that seaweeds like carrageenan [grow naturally](#) in several parts of the country. The commercial carrageenan production and processing industry is well-established. The Philippines's carrageenan industry is also highly export-oriented.

However, the Philippines's carrageenan industry faces challenges; these include pollution in production areas, inadequate supply of dried seaweed for processing, diseases and security concerns in carrageenan-producing areas in southern parts of the country.

European businesses have a favourable view of Philippine seaweed extracts. The Philippines mainly supply refined carrageenan. In the past, unfavourable weather conditions caused a seaweed extracts supply shortage.

#### Morocco

According to Eurostat data, Morocco was the second-largest exporter of agar-agar to the European market in 2018. One of Morocco's key strengths for seaweeds is that agar-agar grows naturally in the wild on parts of [Morocco's coast](#). In certain regions, such as along the Atlantic coast, the [highest-quality agar-agar](#) is harvested. Morocco's other strengths include its favourable geographical position, close proximity to the European market,

and political stability. However, Morocco's agar-agar industry faces challenges. One particular challenge concerns the overharvesting of seaweed from which agar-agar is extracted. This has resulted in the Moroccan government implementing quotas for agar-agar, which require exporters to obtain licences in order to export to the European market. This has also reduced the amount of agar-agar that can be harvested by more than half.

European buyers consider the quality of Moroccan agar to be very high. The fact that Morocco is nearby is also seen as a plus.

## Indonesia

According to Eurostat data, Indonesia was a major exporter of carrageen and agar-agar to the European market in 2018. One of Indonesia's key strengths is that it has an established commercial carrageenan and agar-agar production industry, which is supported by the government.

However, the Indonesian seaweed industry [faces challenges](#) which include more and more clearing of Indonesian seaweed wetlands for tourism development, along with polluted waterways, which threatens seaweed farming. Other challenges Indonesia faces include corruption and lack of transparency, along with a lack of adequate infrastructure.

The processing sector in Indonesia has been growing in recent years. Indonesian carrageenan and agar-agar are good quality according to European buyers. It is priced a bit higher than Chinese carrageenan.

## Chile

According to Eurostat data, Chile was a major exporter of carrageen and agar-agar to the European market in 2018. Chile is a country with rich resources of algae. A key strength is that it has developed a commercial carrageenan and agar-agar production and processing industry.

[Other strengths](#) are numerous free-trade agreements and its being a member of the OECD and Pacific Alliance. The Chilean seaweed industry faces many challenges; these include overharvesting, poor harvesting practices and pests. The naturally growing Chilean red algae from which carrageenan and agar-agar is extracted is also threatened with extinction.

The quality of Chilean carrageenan is usually good. Chile supplies kappa and lambda carrageenan and its hybrids. European buyers have a favourable view of Chilean seaweed products. The supply of seaweed extracts from Chile is much more stable than the supply from Asia.

## India

According to Eurostat data, India is one of the main exporters of carrageen and agar-agar to the European market. The established alginates processing industry is supported by the government; for example, the District Rural Development Agency, the Department of Biotechnology and Tamil Nadu State all support the cultivation and harvesting of seaweed.

Some of the major challenges the Indian seaweed extracts industry faces are climatic conditions, given that India's monsoon periods restrict seaweed cultivation. Other challenges facing the Indian seaweed industry include seaweed health issues, such as the impact of high temperature and diseases, along with a lack of adequate infrastructure.

### Tips:

Find out if your country has programmes helping exporters like you to cultivate and process seaweed, as well as to export to the European market. For information and assistance in exporting, contact government ministries in your country that are involved in trade.

If your country intends to improve its infrastructure, find out if that will help with the distribution and export of your products. You can do this by contacting local or central governmental institutions.

Read the [FAO study](#) on the global status on seaweed production and trade. It contains information on main countries and their challenges.

## What companies are you competing with?

A number of established companies in developing countries successfully export carrageenan and agar-agar to the European market. Features that these companies have in common include their ability to supply high-quality carrageenan and agar-agar, along with their supplying certified products, which adds credibility.

Such companies will also often have a professional website with well-prepared content, which gives them further credibility. Their websites will usually have sections informing prospective buyers about who they are, how they source and process their carrageenan and/or agar-agar, along with providing technical details and certifications, accompanied by professionally taken photographs.

### Chinese companies

Shanghai Brilliant Gum Co., Ltd, also known as [BLG](#), is an experienced Chinese company exporting carrageenan and agar-agar to the European market. One of BLG's key strengths is its ability to export safe high-quality carrageenan and agar-agar to the European market. BLG has [Food Safety System Certification \(FSSC\) 2200](#) and [International Organization for Standardization \(ISO\) 22000:2005](#) certification, which show it has good food management standards in place for its products.

BLG also has [ISO 9001:2000](#) certification, which shows it has quality management systems in place. BLG has an advanced technical team and testing facilities, which ensures its products meet the highest safety and quality standards, with this being one of its key strengths.

BLG is one of the largest producers of seaweed extracts in the world. It has established business relationships with European importers and processors.

### Filipino companies

The Filipino company [TBK](#) is an established carrageenan exporter, supplying the European market. The company's production process adheres to [FSSC 2200](#), [British Retail Consortium \(BRC\)](#) and [good manufacturing practice \(GMP\)](#) standards. It also has an in-house quality assurance laboratory. TBK's other key strength is its commitment to upholding good social responsibility standards, which it achieves through its [corporate social responsibility \(CSR\)](#) policy. Projects related to TBK's CSR policy include providing support to Indonesian communities affected by natural disasters.

TBK offers a wide range of carrageenan extracts for a number of applications, which gives European buyers more flexibility. The company also offers various grades of carrageenan in terms of processing methods.

### Moroccan company

[Setexam](#) is a Moroccan company exporting agar-agar to the European market. One of Setexam's key strengths is its ability to export high-quality [EU organic certified](#) agar-agar to the European market. Organic certification demonstrates superior quality of agar-agar. Setexam's products have [ISO 22000](#) certification, which shows that the company has good food management standards. It also has [ISO 9001](#) certification, which shows it has quality management systems in place for its products.

Setexam's other key strength is its commitment to upholding good environmental management standards, which it achieves through its environmental management policy. Objectives of the policy include complying with environmental policy, guidelines, acts and local and global legislation.

Because of Setexam's wide range of certifications and its well-established relationships with European buyers, it is seen as reliable business partner.

### **Tips:**

Ensure that you and your (European) buyers assess the quality of seaweed extract on the same principles, since you will want to avoid buyers having quality concerns, once they have placed their order. In general European buyers of seaweed extract expect the finest quality.

Consider acquiring certification which proves the high quality of your seaweed extract. For example, this could be [FSSC 22000](#), [ISO 2200](#), [ISO 9001:2000](#) or [BRC](#) certification. Also consider meeting [GMP](#) standards for good manufacturing practices. It will give you an advantage on the European market.

Ensure you have a professional website with well-prepared content which clearly informs prospective buyers of your key strengths. For example, it should show the certification you hold, proving the quality of your products along with your commitment to upholding environmental and social standards.

## **What products are you competing with?**

### **Acacia gum**

Acacia gum, also referred to as gum arabic, is a product competing with carrageenan and agar-agar. Acacia gum is obtained from the pores of acacia trees found in the Sahel region of Africa. The [largest exporters](#) are in developing countries such as Sudan, Chad and Nigeria. Among acacia gum's key strengths are its functional properties, particularly as a stabiliser, binder and emulsifier, which give it many applications in the food and drinks industry.

Another of acacia gum's key strengths is its ability to be used across a range of food and drink products. For example, the confectionary industry uses acacia gum as a texturising and gelling agent, while the fizzy drinks and non-alcoholic drinks industry use it as an emulsifier. In recent years, there has been a significant expansion in the production of acacia gum in developing countries.

Notable challenges include producers lacking production and marketing skills, along with their inability to access good infrastructure and financial services. Quality concerns and lack of awareness of the commercial value of acacia gum are also hampering the demand for it.

### **Guar gum**

Guar gum has been identified as a product competing with carrageenan and agar-agar. Guar gum is derived from *Cyamopsis tetragonoloba*, a drought-tolerant plant native to India and Pakistan. It is also cultivated in several other countries. The plant's drought tolerance is one of guar gum's key strengths. Other key strengths are its functional properties as a thickener and stabiliser, which is why the food and drinks industry uses it.

Guar gum has a wide range of applications in the ice cream, sauce, beverages, bakery and meat industries. The production of guar gum involves relatively low costs. One of guar gum's key weaknesses is that it requires a specific amount of rainfall. Unstable weather conditions can result in occasional major swings in guar supply and prices.

## Tara gum

Tara gum has been identified as a product competing with carrageenan and agar-agar. Tara gum is obtained by grinding endosperm of the seeds of the tara tree (*Casealpinia spinosa*), native to Peru. However, it is also found in other South American countries, such as Venezuela and Argentina. Among tara gum's key strengths are its functional properties, which include it being soluble in hot and cold water. It also works well with other natural food additives for food, such as carrageenan and agar-agar, along with other ingredients.

Tara gum is therefore used by food manufacturers across a range of non-fat and low-fat food applications, such as frozen desserts, cultured dairy products, condiments, baked goods and salad dressing. Tara gum's applications are for a range of products. Compared to carrageenan, [tara gum provides](#) 20 percent more performance, involves 15 percent less cost, as well as 33 percent less cost in processing, while achieving the same performance as 100 percent carrageenan; this is one of its key strengths.

These strengths of tara gum make it a threat to carrageenan and agar-agar. However, the weaknesses of tara gum are that it is subject to [climatic conditions leading to](#) small harvests and thus shortages in supply causing production problems. Tara gum also faces strong competition from synthetically produced gums and thickeners.

### Tips:

Familiarise yourself with products competing with your seaweed extract that are available on the European market. Learn about their strengths and weaknesses. Read the articles [CBI gum Arabic](#) and [CBI gum for food](#).

Use your seaweed extracts strengths as an opportunity to persuade European buyers to purchase it from you. For example, explain its functional properties that make it an ideal natural food additive for food and drink manufacturers.

## 4. What are the prices for seaweed extracts on the European market?

The prices of seaweed extracts depend on various factors. For example, carrageenan prices depend on the processing method used, as well as the quality, grade and type of carrageenan. For example, the price of refined carrageenan can be in the range of 10-25 EUR/kg (FOB prices).

The prices for agar-agar also vary depending on the quality. The prices of agar-agar have increased in the last couple of years because of lack of supply. On average FOB prices of agar-agar are about 20-30 EUR/kg.

Figure 6: Estimated price breakdown of seaweed extracts in the European market



Source: Ecovia Intelligence

### Tips:

Carefully calculate the price breakdown of your seaweed extract before setting and agreeing prices with European buyers. Failing to do so could result in your incurring financial losses, since you could end up selling your seaweed extract for less than what it cost you to produce and export it.



Be flexible with price when buyers order large volumes. One way to do so is to offer buyers a discount, once you have established a relationship with them. This gives you an advantage in your attempt to enter the European market, since it will probably make you more appealing to European buyers. However, to avoid making a loss, ensure you include such discounts in your original calculations, so you do not sell at a lower price than your costs.


This study has been carried out on behalf of CBI by [Ecovia Intelligence](#).

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