# **Entering the European market for essential oils for food and drinks**

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Complying with European regulations is a minimum requirement to access the European market. Special attention should be paid to requirements relating to the safety of essential oils, such as REACH registration of products and proper packaging and labelling. Sustainability and traceability are important and being transparent about your supply chain is crucial. Depending on your specific essential oil, you may face competition from Brazil, India, China or other supplying countries.

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## 1. What requirements and certifications must essential oils comply with to be allowed on the European market?

As an exporter of essential oils from a developing country, you must ensure the safety of your products for use in the European market. You must therefore comply with the mandatory requirements for natural food additives established by the European Union (EU).

#### What are mandatory requirements?

When exporting to Europe, you must comply with the legally binding requirements of the EU. The most crucial requirements relate to safe trade in chemicals and food safety.

#### **REACH**

The most demanding requirement for many essential oil exporters to Europe is compliance with Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals, commonly known as REACH. The REACH system aims to ensure a high level of protection of human health and the environment, including the assessment of hazards of substances.

From a legal viewpoint, essential oils for food are not subject to the same REACH documentation requirements as essential oils for other applications such as fragrances. The European Union legislation in REACH requires suppliers of essential oils for these alternative applications to provide a lot more documentation. Essential oils for flavourings are exempt from REACH.

In practice, however, European buyers of essential oils for flavourings often have the same documentation requirements as buyers of essential oils for other uses. Since they do not know how their customers will use the

essential oil, they need to have all the documentation required for different potential applications, including flavourings and fragrances.

Exporters supplying less than 1 MT of a particular essential oil annually do not need to register their product under REACH. This saves them a considerable administrative burden. The reason that these exporters can still supply to Europe has to do with an underlying safety principle of REACH: greater quantities that are manufactured or imported pose greater risks to human health and/or the environment. A chemical substance that is imported or manufactured by a European company at less than 1MT per year falls outside the scope of REACH.

Exporters supplying more than 1 MT of a particular essential oil must register their oil. For most essential oils, existing suppliers to the European market have already done all the necessary safety testing. These companies have organised themselves in consortia that own the data that is needed for registration and compliance with REACH. Exporters who want to supply an essential oil to Europe can join the consortium and receive a registration number that allows the exporter to supply a permitted maximum tonnage of that essential oil to Europe. Registration with the consortium requires a partner in Europe that can act as an Only Representative (OR). Examples of ORs are Regulatory Compliance Limited in the UK and REACHLaw in Finland. The registration fee of the consortia depends on several factors and is usually in the €5,000-10,000 range.

Without their own registration numbers, exporters are restricted to:

- 1. selling to European companies who have a registration number for that substance.
- 2. selling up to 1MT per year to a company that does not have a registration number.

Note that under both options you will be required to prepare Safety Data Sheets (SDSs). An SDS includes information such as the properties of the essential oil; the physical, health and environmental hazards; protective measures; and safety precautions for handling, storing and transporting the product.

#### Tips:

For each of your specific essential oils, weigh the advantages and disadvantages of selling small volumes below 1 MT to many different customers versus selling larger volumes. Also, consider your need and ability to bypass traditional importers who are members of a consortium. Consortium fees can be quite high and if you do not have a wide client base yet, it is uncertain whether you will earn this investment back.

Small suppliers of niche oils must at least provide data on the chemical composition of their essential oil, including percentages of each constituent. The composition generally gives a good indication of potential safety risks, as a lot of knowledge is already available on the safety of individual constituents.

#### **Food safety**

To enter the European food market you must comply with several regulations that guarantee food safety, including:

- General Food Law: This law mainly sets requirements for traceability, hygiene and control. Compliance with
  this legislation ensures that the seaweed hydrocolloids are safe to eat and that legal limits for food
  contaminants are not exceeded.
- Regulation (EC) 1333/2008, which sets the rules on food additives, including definitions, conditions of use, labelling and procedures.

As part of its efforts to protect its consumers, the EU carries out regular inspections at the border and at all further stages of marketing. Individual cases of non-compliance with European food legislation are reported through the Rapid Alert System for Food and Feeds (RASFF), which is freely accessible to the general public.

Be aware that repeated non-compliance with European food legislation by a particular country might lead to special import conditions or even suspension of imports from that country. Those stricter conditions include laboratory tests for a certain percentage of shipments from specified countries. The New Official Controls Regulation will extend its scope to organic products.

#### Tips:

Check the CBI study What requirements must natural food additives comply with to be allowed on the European market?, which provides further information on mandatory requirements you must comply with to enter the European market.

Read the EU's guidance on how to be compliant with and implement the EU's General Food Law. It will give you a greater understanding of the mandatory requirements you must comply with to enter the European market.

Read the EU's factsheet on food traceability, which provides useful information and guidance on food traceability in the EU.

Read and comply with the EU's Key Obligations of Business Operators, as they derive from EU food safety legislation.

#### **Documentation**

European buyers of essential oils expect exporters to provide them with well-structured and organised product and company documentation, as this helps prove you meet their requirements, such as particular quality specifications. You must therefore provide buyers with documentation.

European buyers of essential oils usually expect exporters to provide them with Safety Data Sheets (SDS), Technical Data Sheets (TDS) and Certificates of Analysis (CoA). An SDS includes information such as the properties of the essential oil; the physical, health and environmental hazards; protective measures; and safety precautions for handling, storing and transporting the product. A TDS is a specification sheet for a product and summarises the technical characteristics of the product. A CoA shows the results of laboratory testing.

#### Tip:

See the CBI study How to prepare technical data sheets, safety data sheets and sending samples for natural food additive. It provides information and guidance on preparing documentation as well as sending samples.

#### **Labelling**

You are obliged to label your products if you want to export them to Europe. Your product needs to be labelled so European buyers as well as customs authorities, for example, can trace its origins. Another reason is to

ensure safety during transport and storage.

In Europe, most essential oils are considered hazardous chemical substances. You must comply with Regulation EC 1272/2008 on Classification, Labelling and Packaging (CLP) of chemicals. The aim of this regulation is to identify hazardous chemicals, inform users about their hazards using standard symbols and phrases, and provide rules on packaging.

On your label you must include the relevant safety phrases, risk phrases and hazard symbols (example below).

Figure 1: Hazard symbol required for clove oil



Source: ECHA

In addition to complying with the CLP Regulation, you must apply common export labelling rules and ensure that your labels include the following information in the English language, unless your buyer indicates otherwise:

- product name
- batch code
- whether the product is destined for use in food products
- place of origin
- name and address of exporter
- date of manufacture
- best-before date
- net weight
- recommended storage conditions

If you offer organic-certified essential oils, also add the name/code of the certifier and the certification number.

As an exporter, you should make individual batches traceable with markings on each container. Also register these batches in an administrative system, whether they are produced by blending or not.

#### Proposed new regulation on Classification, Labelling and Packaging (CLP)

The essential oils sector in Europe currently has great concerns over potential policy changes in the European Union, which may result in essential oils being classified as 'potentially harmful chemicals'. This could mean new burdens for essential oil producers and could potentially threaten the viability of exporting certain essential oils to Europe. The concerned regulation is the EU's Classification, Labelling and Packaging (CLP) Regulation (EC Regulation 1272/2008).

The European Commission has proposed revisions to the CLP Regulation, including classifying essential oils as 'potentially harmful chemicals'. The EU Parliament has already proposed an exemption for 'renewable substances of botanical origin' such as essential oils. The Spanish Presidency of the European Council is the third party negotiating the policy changes.

Under the Commission's initial proposal, essential oils would be classified on the basis of their different constituent parts. As a consequence, if one of the many hundreds of constituents is of concern, the whole oil risks being restricted, even if the substance as a whole is not a risk.

The International Federation on Essential Oils and Aroma Trades (IFEAT) has created the campaign Protect Essentials to advocate non-restricted trade in essential oils.

IFEAT's position is that robust scientific data and centuries of safe use across the globe show that essential oils are safe to use. A fundamental change to classify essential oils as potentially harmful chemicals would put the entire essential oils industry in Europe in jeopardy.

#### Tips:

Find out if your product is classified as hazardous in the classification and labelling database on the website of the European Chemicals Agency (ECHA). This database is a useful tool to determine which symbols and warning phrases must appear on your label.

Read Understanding CLP. It will give you a better understanding of the mandatory requirements you must meet to enter the European market.

Keep an eye on the developments around the CLP Regulation by following IFEAT's LinkedIn page to anticipate the potential threat and any additional requirements for classification, labelling and packaging of essential oils that may be introduced. You can also become a member of the International Organization of the Flavor Industry (IOFI) to automatically receive the latest news on legislative developments and other relevant topics in the flavourings industry.

#### **Packaging requirements**

European buyers generally base their packaging requirements on ISO standard 210:2023. This standard provides general rules for packaging, conditioning and storage of essential oils.

These are some important packaging instructions:

- Always use United Nations approved packaging. This packaging is suitable for the transport of dangerous goods, including essential oils. Contact your packaging supplier for more information.
- Consult your buyer to ask if there are any company-specific packaging requirements to take into account.
- For details on packaging materials, visit the European Federation of Essential Oils website for transport of dangerous goods.
- Preserve the quality of essential oils by using containers of a material that does not react with constituents of the oil (e.g. lacquered or lined steel, aluminium).
- Do not reuse packaging materials.
- Do not use detergents if you must clean containers of working materials. They may contaminate the oil because of residues. Only use water or alcohol and let it dry thoroughly.
- Fill headspace in containers with a gas that does not react with constituents of your oil (e.g. nitrogen or carbon dioxide). If your essential oil reacts with air in the container, it may result in quality deterioration.
- Facilitate recycling of packaging materials by European buyers. For example, use containers of recyclable material (e.g. metal).
- Store containers in a dry, cool place to prevent quality deterioration.
- Keep organic-certified essential oils physically separated from conventional essential oils.

Figure 2: Examples of common types of packaging



#### Tips:

Always ask your buyer for their specific packaging requirements.

Consider using recycled and/or recyclable packaging materials, as environmental sustainability is becoming increasingly important for European buyers. Read this guide on packaging to reduce environmental impacts for information and guidance on ways to do this.

#### What additional requirements and certifications do buyers often have?

Buyers of essential oils have additional requirements relating to quality, certificates and contract terms. You will have to comply with these requirements to be successful on the European market.

#### Flavours, colours and solubility

What flavours buyers prefer depends on the application. For example, a certain buyer may prefer a sweet citrus oil. Another buyer may be looking for a more acid citrus oil.

Buyers in Europe generally prefer a colourless or light-coloured essential oil. If the essential oil is colourless or lightly coloured, it doesn't affect the appearance of the food or beverages in which they will be used. European buyers often prefer to use other means like colouring agents to change the colour if desired.

Food and drink manufacturers often prefer essential oils that easily dissolve in water or oil. This enables them to make dilutions (water or oil containing essential oil) and apply exact quantities to their food or drink. Additionally, high solubility may prevent the need for an emulsifier or stabiliser.

#### **Purity**

For European buyers, essential oils for food must be 100% pure (i.e. not mixed with any other essential oils that have similar characteristics) and 100% natural (i.e. not adulterated through the addition of any chemicals).

If you dilute an essential oil with solvents, the product must be called a flavour or you must state that the oil is diluted (e.g. 20% in propylene glycol). When you have mixed your essential oils, you should call them a blend of essential oils.

To determine the purity of an essential oil, buyers use physical analysis of density, optical rotation and refractive index. They also use chemical analysis (i.e. gas chromatography) to determine the purity.

#### Standards and consistency

The International Standards Organisation (ISO) provides standards for several major essential oils. These standards specify physical and chemical properties, for example how much of a certain substance your essential oil must contain. Buyers in Europe may also have their own specifications, which can differ from ISO standards. This depends on their application for the essential oil.

Buyers appreciate quality consistency over the year through standardisation. They expect suppliers to standardise products by establishing standard operating procedures (SOP) for collection/harvesting and processing practices (e.g. timing of harvest and blending early and late crops).

In addition to the quality requirements above, European buyers of essential oils for food also consider quality consistency. They prefer a large volume with a consistent quality level over smaller batches of different qualities.

#### Tips:

European buyers expect you to have expert knowledge of the product that you supply. For example, you must have detailed knowledge about the origin of the raw materials, production techniques and suitable equipment for processing.

Minimise variation in quality within a lot. Follow strict grading and sorting standards for raw materials selection. Variation in the physical properties of the raw materials also means that the essential oil content and chemical profile will vary.

Research effects of different extraction methods (temperature, pressure, time) on the quality of your essential oil. Where available, use international specifications as a baseline reference.

Work together with a local university department to test your essential oil and gain knowledge on factors that influence quality. For example, detecting differences in quality from different sources can help identify the best sources. You can then analyse the differences in production conditions between the sources to pinpoint the factors that influence quality.

#### Certification

European buyers often demand certification to demonstrate the safety and quality of essential oils. The world's major food retailers and manufacturers are increasingly requiring certification to GFSI-recognised standards. The Global Food Safety Initiative (GFSI) is a non-profit association of industry experts committed to improving food safety along the value chain. The GFSI approves a number of food safety standards covering farming, packaging, storage and distribution. GFSI-recognised standards for audits and certification include FSSC 22000 and ISO 22000.

Figure 3: Examples of certification



#### Tip:

Before getting certified, research your targeted market segment and talk to your buyers to determine the certifications they demand, as this can vary from buyer to buyer.

#### **Payment terms**

Payment is central to all trade and presents risks to everyone involved. The type of payment terms used depends on several factors, such as the order volume and the length of your business relationship. Conduct risk assessments of the available payment terms before trading with European buyers.

Although there are several payment methods available to both importers and exporters, Letters of Credit are considered as having the safest payment terms. This is because a Letter of Credit (LC) lets both parties contact a neutral arbitrator, usually a bank, to resolve any issues. For the exporter, the chosen bank is a guarantor of full payment if goods have been shipped.

Based on their needs, importers and exporters can choose from several LC payment terms. These include standby, revocable, irrevocable, revolving, transferable, non-transferable, back-to-back, red clause, green clause and export/import. For exporters, standby LC is considered the safest, and it is frequently used in international trade. This is because it provides security to both exporters and importers that don't have much of a trading history with each other. Once a business relationship is established, other payment methods such as cash in advance, documentary collections and open account can be used as well. It is also common to use combinations of various payment methods.

#### Tips:

Conduct due diligence on your potential buyers to ensure they have the resources to pay for your essential oil.

See the CBI study 10 tips for organising your export of natural food additives to Europe, which provides information and guidance on payment terms used in this sector.

#### **Delivery terms**

When agreeing on 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 a European buyer. Essential oils are transported to Europe by plane or boat. For sea freight, the most commonly used Incoterms are EXW (Ex-Works), FOB (Free On Board), CFR (Cost and Freight) and DDP (Delivered Duty Paid). For freight they are EXW, CIP (Carriage and insurance), CPT (Carriage Paid To), DDP and DAP (Delivered At Place).

Delivery time: European buyers prefer shorter delivery times. Air cargo is usually faster than sea freight. Air freight is also more reliable for on-time delivery.

Delivery volume and/or quantity of order: Larger quantities are often cheaper to ship by sea. With lower volumes, air freight can be less expensive as margins are smaller.

Cost of delivery method: Sea freight is estimated to usually be 4-6 times cheaper than air freight. This applies to larger volumes.

#### Tips:

Visit the Freightos website and use the Freightos freight calculator to get international freight rate price information for transporting freight by ship and air. Doing so will allow you to make a more informed decision before agreeing on delivery terms with buyers.

See the CBI study 10 tips for organising your export of natural food additives to Europe, which provides information and guidance on delivery terms used in this sector.

#### What are the requirements for niche markets?

In Europe, there is growing consumer demand for products that have been produced under environmentally and socially sustainable conditions. Sustainable production is rapidly becoming a crucial requirement for access not

only to niche markets for ethically sourced products but also to the mainstream market. European buyers largely follow the directions on sustainable production and trade as set out in the European Green Deal.

Source: Mintel GNPD

Many European buyers are demanding more transparency in their supply chains as a first step to making their supply chains more sustainable. As an exporter, a useful first step to respond to this need for transparency is to become a member of the Supplier Ethical Data Exchange (SEDEX). SEDEX is an online platform where you can make information on your production process available to buyers.

Certification schemes such as EU organic certification still have limited relevance in the essential oils market. Currently, many essential oils are allowed as non-organic ingredients in an organic-labelled product. This is because there is no organic alternative available and the dosage in the end product is lower than 5%. This allows for an exemption in the EU organic standard as laid down in EU Regulation 2018/848. However, in the future this will probably change, as by way of stricter standards the EU will put pressure on all sectors to use only organic-certified ingredients for products with the EU organic label.

#### Tips:

Read more about common practices to improve sustainability of essential oil companies in the CBI study The European market potential for essential oils for food and drinks.

Read one of the sustainability reports of leading flavours and fragrances manufacturers such as IFF and MANE to understand their concerns and how you can address these concerns in your own business.

## 2. Through what channels can you get essential oils on the European market?

The main markets for essential oils are cosmetics (including fragrances and aromatherapy), foods and beverages (including tea), and home care products. Here we focus on the European essential oils for food market. This market accounts for roughly 30% of the total essential oils market. See our studies on essential oils for fragrances and essential oils for aromatherapy for more information on the other markets.

#### How is the end-market segmented?

Essential oils have a wide range of applications. In the food and drink industry these include tea, sweet bakery products and chocolate products as the main categories in which new essential oil-based product launches take place.

Source: Mintel GNPD

Although the above Mintel data on new product launches do not show the soft drinks category, this segment of the food and beverages industry is also a major user of essential oils. Soft drink manufacturers use mostly low-cost essential oils such as orange and lemon.

#### Through what channels does a product end up on the end-market?

Essential oils commonly pass many different intermediaries before they reach the consumer. Importers and ingredient suppliers add value to the product through their logistics services. Flavouring manufacturers as well as food and beverage manufacturers add value by transforming the product.

Figure 6: Market channels for essential oils



Source: ProFound

#### **Importers and Distributors**

Most importers focus on the import of essential oils from the countries of origin. A few others focus on sales and distribution, buying many of their essential oils from other importers. The latter type of importers, called distributors, only source their most strategic products in the country of origin.

Their major functions in the value chain:

- Lowering costs to end-users by importing relatively large volumes to achieve economies of scale and selling smaller quantities.
- Protecting end-users from market volatility by keeping stocks of products that serve as a buffer against shortages and price increases.
- Fast delivery from their European warehouses.
- Offering a wide range of essential oils to their buyers. This is convenient for the latter, who do not need to purchase from many different suppliers.
- Administration of trade in compliance with EU legislation, such as REACH and CLP.
- Researching potential applications of niche oils and introducing them to the respective manufacturers.

They have a large network of suppliers from all over the world and can switch relatively easily to other suppliers, which gives them a lot of negotiation power. They are up-to-date on current price levels in the global market and provide little room for margins unless you can prove that your product is unique and is worth a price premium. They may also use agents, but this is less common. Many importers and distributors have long-term partnerships with essential oil producers in developing countries. In most cases, they sell the essential oils to food manufacturers all across Europe and even outside Europe.

Importers include Albert Vieille (part of Givaudan) and Roeper. Oqema and Ultra International are some distributors focusing on sales.

#### Flavours and fragrances manufacturers

Flavours and fragrances manufacturers focus their activities on research and development of solutions for manufacturers of foods, beverages and many other products. These companies have extensive technical knowhow on food applications, and most of their added value comes from this knowledge. They use essential oils as ingredients in their flavourings. These flavourings often consist of several ingredients. In many cases, they also contain aroma chemicals or preservatives or stabilisers. The composition of a flavouring depends on the application and is often tailored to the exact needs of the food manufacturer, which determine the properties of the end product.

Flavours and fragrances manufacturers usually apply different sourcing strategies to secure their raw material supplies. They source their most strategic raw materials directly from origin. They can have their own production sites or work together with long-term strategic partners. Other raw materials come from importers in Europe or directly from exporters in the countries of origin. Under pressure from consumers and European policymakers, flavours and fragrances manufacturers are increasingly working more directly with suppliers in

countries of origin. They must have transparency in their supply chains to conduct due diligence with respect to potential or actual adverse impacts on human rights, the environment and good governance in their operations and business relationships.

Flavours and fragrances manufacturers include Givaudan, Lucta and Voegele. The largest flavours and fragrances manufacturers, like Givaudan, target different market segments all over the world. Smaller flavours and fragrances manufacturers focus on a more limited range of segments and countries.

#### **Agents**

Agents act as intermediaries between you, importers and other buyers in the food industry. They are actors with vast market knowledge and can help you assess and select interesting buyers. Some agents are independent, while others are hired to make purchases on behalf of a company. Be prepared to pay an extra commission for their work, usually ranging between 3 and 10%. Consider working with a representative that enjoys a good reputation. You can look for commercial agents on the website of Internationally United Commercial Agents and Brokers (IUCAB), which lists all their national member organisations.

#### Tip:

Visit trade fairs and conferences like Food Ingredients Europe, IFEAT Conference, Anuga and BioFach to identify and meet potential buyers. Read the CBI study tips for finding buyers on the European natural food additives market for an overview of trade fairs in this sector.

#### What is the most interesting channel for you?

If you are a small supplier and new to the European market and want to export essential oils for food to Europe, it is best to target importers of raw materials (e.g. essential oils) for the food industry. These companies are specialised in the import of a wide range of raw materials for flavouring manufacturers and other users such as food manufacturers.

In contrast to the flavours and fragrances manufacturers with their own production sites and long-term partners, importers are interested in having a large network of suppliers in different countries. They need different sources to secure supplies. For example, when one source has a disappointing harvest, importers can turn to their other sources. These shortages in the market provide windows of opportunity for new suppliers to step into the market.

If you are a large supplier and can provide very high supply security, you can also target the European flavours and fragrances manufacturers. They are often looking for long-term partners and have more specific requirements than importers in terms of product specifications and sustainability requirements.

Finding European food manufacturers with an interest in sourcing directly from the country of origin is generally more difficult. They purchase most of their flavourings from European flavours and fragrances manufacturers. These food manufacturers prefer sourcing in Europe over purchasing directly from suppliers in developing countries for several reasons:

- They increasingly need more complex flavours and fragrances to differentiate their products from the competition. They rely on flavours and fragrances manufacturers to do research and develop new products, such as unique low-cost flavours and fragrances that retain their functional properties under specific conditions (e.g. heat and acidity).
- They increasingly demand tailor-made products for use in very specific product formulations. This requires

close collaboration with processors.

• They require high quality consistency, which is often achieved through fractionation and isolation of chemical constituents of essential oils. These processes require high-tech equipment and skilled staff.

#### Tips:

Benefit from the experience and knowledge of specialised European importers instead of approaching end-users directly. Especially for exporting specialty essential oils, traders are the most suitable distribution channels.

Provide detailed technical data to importers to enable them to inform their buyers on potential applications. Refer to the section on documentation for the type of technical data importers require.

Find out whether your buyer perceives your product as a strategic ingredient. Strategic essential oils are of crucial importance to buyers, because they use them in many products while their availability is not always certain. If your product is strategic to them, invite them to work together with you on the sustainability of supplies.

### 3. What competition do you face on the European essential oils market?

For the long term, the balance between global supply and demand is shifting in favour of suppliers. Growing economies in Asia like China, India and Indonesia are causing a rise in demand for essential oils and the raw materials used for distillation. At the same time, global supplies are under pressure as land for agriculture is converted to urban areas, farmers are migrating to cities, climate change causes crop failure, and farmers on occasion switch to food crops with more stable demand and prices.

These developments will increase sales opportunities and reduce dependency on Europe as a market for your products. You will get higher prices for essential oils, especially if you can meet the stringent requirements of European buyers. Although competition on the essential oils market will decrease, multinational flavouring manufacturers will provide significant competition in ready-to-use flavourings. They will have often already gained a strong position in the emerging markets.

#### Which countries are you competing with?

In 2022, total European imports of essential oils amounted to €2.2 billion. Approximately 53% of the value was imported from developing countries. Most imports came from Brazil, China and India, followed by Indonesia, Egypt and South Africa.

Source: ITC Trade Map

Source: ITC Trade Map

#### Brazil: Europe's main supplier of low-cost citrus oils

Brazil is the leading supplier of commodity oils such as orange and eucalyptus, and is by far the largest exporter of essential oils to Europe, both in value and volume. Brazil's industrial-scale plantations and processing facilities can produce citrus oils and eucalyptus oil at low prices that can be matched by few other sources. Brazil currently has a share of more than two-thirds in global supplies of orange oil.

In 2022, Brazil exported 15,090 tonnes of essential oils to Europe, worth more than €147 million. An overall positive trend in demand for Brazilian essential oils was observed between 2018 and 2022, with average annual growth rates of 1.3% for volume imported and 5.8% for value exported. Although import values fell sharply in 2019 and 2020 due to trade barriers resulting from the COVID-19 pandemic, growth was driven by an extraordinary 75% recovery in 2022.

Main oils exported: orange (14,244 tonnes, worth €125 million), citrus fruits such as lemon and lime (192 tonnes, worth €9.6 million), and other (518 tonnes, worth €8.8 million).

#### India: major extraction industry processing a wide range of raw materials

India produces a wide range of raw materials for mostly high-value essential oils, and has been investing heavily in the extraction of essential oils and other products from these raw materials. The Make-In-India programme of the Indian government promotes the processing of essential oils and other plant extracts in India.

The role of India in the European essential oils trade is particularly large for menthol crystal and essential oil and other products made from mint. India contributes over 80% of the total worldwide production.

India is the second largest exporter of essential oils to Europe by value and the third largest by volume. In 2022, India exported 2,983 tonnes of essential oils to Europe, worth more than €102 million. Demand for Indian essential oils showed a positive trend over the last five years. Average annual growth rates since 2018 are 3.1% for volume imported and 4.5% for value imported. In contrast to other exporting countries, India did not experience a decline in either the volume or the value of its exports to Europe as a result of the COVID-19 pandemic. In fact, between 2018 and 2020, imports increased steadily and declined only slightly in 2021 and 2022.

Main oils exported: a group of 'other' oils without a specific HS code such as jasmine absolute (643 tonnes, worth €52 million), mints other than peppermint (1,600 tonnes, worth €26 million), and peppermint (691 tonnes, worth €20 million).

#### China: low-cost supplier of eucalyptus oil

China is a particularly big supplier of low-value oils, such as eucalyptus, cedar wood, citronella, mint and star aniseed. In 2017, China produced around 17,000 tonnes of eucalyptus oil (info only accessible to paying members), which makes it the world's largest producer of this oil. European food manufacturers use a lot of eucalyptus oil for candies and chewing gum. China's cedar wood oil goes to fragrance applications such as soaps, aromatherapy and floor polishes, and has little relevance for the food industry. Similarly, China's citronella oil and geranium oil mainly have uses in cosmetics, perfumes and insect repellents. Besides these major essential oils, China also produces considerable amounts of spice oils such as pepper oil.

China is Europe's third largest supplier of essential oils by value and second largest by volume. In 2022, China exported 3,985 tonnes of essential oils to Europe, worth €89 million. Overall, European demand for essential oils from China has decreased in recent years. Between 2018 and 2022, each year on average, volume exported fell by 2.0% and value exported fell by 3.7%. Part of this decrease can be associated with the COVID-19 pandemic and restrictions in China that had a negative impact on production. Increasing demand from the growing domestic market in China can also explain part of the decrease in supplies to Europe. In 2021-2022 there was another significant drop of 17% in volume and 3.7% in value. This was partly caused by reduced demand from aromatherapy users and partly by competition for Chinese eucalyptus oil from camphor – processors can obtain the substance 'eucalyptol', found in eucalyptus oil, from camphor oil too.

Main oils exported: a group of 'other' oils without a specific HS code such as eucalyptus (3,690 tonnes, worth €84 million), and mint (259 tonnes, worth €3.1 million).

#### Indonesia: supplier of a wide range of essential oils, including many niche oils

Indonesia plays a major role in the supply of clove, patchouli, nutmeg and citronella oils. In terms of volumes, clove oil is the main product from Indonesia. In 2014, Indonesia produced around 3,800 tonnes of clove oil (info only accessible to paying members). Patchouli oil has little relevance for the food industry. Its major applications are in cosmetics and home care. The Indonesian share in global nutmeg oil production is 80%, with a production of 380 tonnes in 2014. Besides these major essential oils, Indonesia also produces many niche oils such as cajeput, vetiver, Cananga, massoia bark and ginger.

Indonesia is the fourth largest exporter of essential oils to Europe. In 2022, it exported 1,411 tonnes of essential oils, worth around €51 million. Between 2018 and 2022, each year on average, volume exported dropped by 2.3% and value exported grew by 1.8%. This suggests an increase in the prices of these natural ingredients. The performance of Indonesian exports of essential oils is interesting, as they fell in 2019 but recovered quickly and grew steadily in 2020 and 2021. However, in 2021-2022 Indonesian exports fell by more than 20%.

Main oils exported: a group of 'other' oils without a specific HS code such as patchouli, vetiver and nutmeg (1,276 tonnes, worth €46 million), and citrus fruit (105 tonnes, worth €3.6 million).

#### Egypt: supplier of a wide range of essential oils across the Mediterranean sea

Egypt is very close to Europe and has a well-established essential oil industry that produces oils from geranium, basil, chamomile, jasmine absolute, onion, coriander, cumin, violet, cassie absolute, petitgrain, neroli, marjoram, aniseed, leek and tagetes.

In 2022, Egypt exported 476 tonnes of essential oils, worth approximately €27 million. Between 2018 and 2022, average annual rates went down by 1.0% for volume exported and significantly rose by 4.3% for value exported. This suggests a relevant increase in the prices of these natural ingredients. Moreover, in 2021-2022, exports of essential oils from Egypt to Europe increased by 21% in value and 5.8% in volume, which forecasts a positive trend for the coming years and suggests opportunities for exporters.

Main oils exported: a group of 'other' oils without a specific HS code such as basil, chamomile and tagetes (305 tonnes, worth €18 million), citrus fruit such as petitgrain and neroli (95 tonnes, €5.4 million), and mints (76 tonnes, €2.1 million).

#### South Africa: growing exports of essential oils to Europe

South Africa is a major producer of eucalyptus and citrus oils. Besides these major essential oils, South Africa supplies several lesser-known indigenous niche oils, such as buchu, cape chamomile, helichrysum, lippia and rose geranium. Total production of essential oils amounts to roughly 3,000 tonnes. The industry is organised in the Southern African Essential Oil Producers' Association (SAEOPA).

In 2022, South Africa exported 1,243 tonnes of essential oils to Europe, worth €19 million. Although not the largest exporter, South African exports are growing at a fast pace and are very attractive for exporters interested in entering the European market. Over the last five years, each year on average, volume exported grew by 11% and value exported by 5.0%. South African exports were affected by the COVID-19 pandemic and fell sharply in 2019. However, they recovered rapidly in 2020, especially in terms of volume. In 2021-2022, South Africa's exports to Europe showed outstanding growth of 32% in value and 11% in volume.

Main oils exported: a group of 'other' oils without a specific HS code such as eucalyptus (181 tonnes, worth €9.1 million), orange (414 tonnes, worth €4.3 million), and citrus fruit (198 tonnes, worth €3.5 million).

#### Tips:

Position yourself against competing countries by highlighting your country's strengths to European

buyers, as they make you more appealing. Strengths of your country can include its close geographical proximity to the European market, the wide range of essential oils available, or a unique flavour profile of your products.

Consider joining industry associations that help exporters of essential oils in developing countries like yourself. Associations include the IOFI, the Indonesian Flavours and Fragrances Association (AFFI) and the Southern African Essential Oil Producers' Association (SAEOPA).

#### What companies are you competing with?

The manufacturing of flavours and fragrances from essential oils for the European market is concentrated in Europe. Many of these flavours and fragrances manufacturers have essential oil production locations for their strategic raw materials in the countries of origin. You will see that many of these companies are also members of the essential oil industry associations in the production countries. Besides these large international R&D-focused companies, you will compete with local businesses.

Below are examples of companies that are part of the competition you will face on the European market.

#### **Brazilian companies**

The Dierberger Group is one of Brazil's leading essential oil producers. It was founded in 1893 and currently has more than 6,000 hectares of land for cultivation of raw materials. Dierberger is organic-certified and produces orange, bergamot, lemon, mandarin, grapefruit and eucalyptus oils, mint oils, and a range of minor oils.

EssenceFlora is a leading producer of eucalyptus oil. The company is vertically integrated from seedling production to sales.

#### **Indian companies**

Kelvin Natural Mint PVT Ltd was established in 1994 and is one of India's leading mint oil suppliers. Kelvin supplies peppermint, spearmint and piperita oils, menthol crystals and eucalyptus oil. The company supplies many of their essential oils in organic-certified quality.

N.S. Mint Products Pvt. Ltd. was established in 2013 and is another leading supplier of mint products in India. The company is located in a major mint-growing area and supplies mentha arvensis, mentha piperita, spearmint and basil oils.

#### **Chinese companies**

Hangzhou Grascent Co., Ltd is one of China's leading manufacturers of cedarwood oil and products made from cedarwood oil. The company has ISO9001:2008, ISO14001, KOSHER and HALAL certificates. It has invested extensively in research to develop different products from cedarwood oil and has obtained 12 patents.

Guangxi Gengyuan Flavor & Fragrance Co. Ltd. is a producer of cinnamon oil and other products from cinnamon such as coumarin and natural benzaldehyde. The company is located in a large cinnamon-growing area and invests in research and technology to support its innovation.

Jiaxing Sunlong Industrial & Trading Co., Ltd. is a supplier of essential oils and aroma chemicals. It was established in 1987 and is now part of the WINSUN GROUP. Jiaxing Sunlong has a turnover of US\$50 million. The company supplies cedarwood, eucalyptus, sassafras, citronella, geranium, ginger and star aniseed oils.

#### **Indonesian companies**

Many of the international flavours and fragrances manufacturers are active in Indonesia: IFF, Firmenich, Givaudan, Kerry Ingredients, Mane, Robertet, Sensient and Symrise.

Indesso was established in 1968 as a distiller of clove oil and is now Indonesia's leading producer of clove oil and products made from clove oil. Indesso is a research-driven company and puts emphasis on their sustainability. They are registered with SEDEX, have a Gold rating by EcoVadis and publish annual sustainability reports. In 2022 and 2023, Indesso won Deloitte's Best Managed Companies Award.

VAN Aroma was founded in 2006 as part of Ultra International, which is headquartered in India. VAN Aroma supplies patchouli, nutmeg, clove, citronella and vetiver oils, plus several other products made from these Indonesian essential oils and their raw materials. The company distributes its products to European buyers through Ultra International B.V. in the Netherlands.

#### **Egyptian companies**

A. Fakhry is the leading essential oils producer in Egypt. It was founded in 1955 and produces some 50 different essential oils for different industries, including the food industry. Fakhry can offer many essential oils in organic-certified quality and has an FSSC22000 certified food safety management system. It is SEDEX- and EcoVadis-registered and has a certificate from UEBT for ethical sourcing. The company has a solid reputation in the market and maintains strong relations with its supplying farmers.

Hashem Brothers is another well-established Egyptian company. They supply some 60 products to the market, including jasmine concrete, geranium and neroli oils. It has an EU organic certificate and an FSSC22000 certificate for food safety management.

#### **South African companies**

Eucaforest is one of the eucalyptus oils producers in South Africa. The company also produces isolates from eucalyptus oil.

Skimmelberg is a producer of indigenous niche oils such as buchu and cape chamomile. Skimmelberg is known for its production of niche oils that are only available from South Africa.

#### What products are you competing with?

Apart from the competition with other suppliers of your essential oil, you will face competition from synthetic flavourings. These synthetic competitor products are most relevant for essential oils for which global production fluctuates. After a bad harvest in a major production region due to weather conditions, prices usually surge, leading to new farmers stepping into the market. A few years later, buyers have replenished their stocks of the product and farmers produce more than the market needs. Prices drop and farmers step out of the market again. Mint oils is one market where such developments regularly take place.

Manufacturers in Europe need stable supplies, and when they cannot secure them, some will use substitutes. In the case of menthol derived from mint oils, they can switch to synthetic menthol. In recent years, three large manufacturers of synthetic menthol increased their production capacity. Production sites of two of these manufacturers (BASF and Symrise) are located in Germany. Synthetic menthol competes directly with some of the menthol extracted from natural mint oil. As a result, European imports of mint oil were partly replaced by synthetic menthol.

Despite the increased offer of cheap synthetic menthol, the market for natural mint oil has not collapsed. European demand for natural foods, as opposed to synthetic foods, remains strong. In fact, environmental and social issues are becoming increasingly important factors in consumers' choices. As this is a growing trend, producers of food are increasingly looking for natural ingredients to include in their products.

#### Tips:

Position yourself against competing products. Do this by highlighting the strengths of your company and your product, such as your natural production processes.

Address the weaknesses of your product compared to its synthetic equivalent, such as quality consistency and quantities. When specifications of your essential oil differ from previous supplies, clearly communicate to your buyer what caused the differences (e.g. quality of crops).

#### 4. What are the prices for essential oils?

Prices of essential oils differ widely. An important factor determining price is the oil yield of the raw material (the percentage of oil that can be extracted from the raw material). For example, orange oil yields are relatively high, ranging between 0.4% and 0.5% and fetching spot prices around US\$8-10/kg in 2022. Distillation of onion yields only between 0.005% and 0.01% of essential oil. This translates to prices of up to €550-650/kg for onion oil.

Prices of raw materials are another determining factor. Changes in the raw material's availability can have a significant influence on the price of an essential oil. Natural disasters, poor harvests and changing regulations are common causes of raw material shortages.

The long-term prospect for the essential oils market is an increase in prices, as demand continues to rise while supplies of essential oils are under pressure. There is a global need for land, water and other natural resources to produce more food for the growing world population. The growing pressure on land means that farmers will get increasing income from food production and that essential oil production becomes less attractive unless prices of essential oils go up. The pressure on land is particularly strong in Asia. To illustrate this fact, the Asian market for spices and spice oils is growing and far outsizes the European market. This situation implies a large increase in competition from Asian buyers for European buyers of spices and spice oils.

Exporters and importers typically use freight forwarders to arrange transport to the importer. Costs of transport tend to be around 1%, but heavily depend on the locations of the exporter and the importer. The importer adds costs of clearing the goods, inspection and storage. Finally, the sales margin of the importer depends largely on the size of the order. If agents are involved, they typically receive a small commission (3-4%). However, their actual profit margin strongly depends on volumes sold and gross margin. Flavour and fragrances manufacturers add up to a few percentage points depending on their activities, such as blending and supporting food manufacturers with their product development. Distributors, including importers, usually add 10-60% to the value of the product, depending on the order size: their markup is around 10% for big orders and up to 60% when the orders are very small.

Table 1: Typical price breakdown for essential oils

Player	Typical price in the value chain
Exporter	100%
Importer	120%

Flavour manufacturer	250%
Food or drink manufacturer	300%

Source: ProFound

#### Tips:

Carefully calculate the price breakdown of your essential oil before setting and agreeing prices with European buyers.

Monitor harvests of raw materials in major production countries. This approach helps you anticipate price developments for your specific essential oil.

Check commercial databases showing the average world price for products like essential oils. Procurement Resource is an example.

ProFound carried out this study on behalf of CBI.

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