## **Exporting essential oils for fragrances to Europe**

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Essential oils for use as fragrances in cosmetics offer opportunities to manufacturers of such oils in developing countries. Safe products are a must; this requirement includes a verifiable supply chain from producer to exporter. Marketing stories are built around the origin of the essential oil, which can be enhanced with certifications. Innovation opportunities include physical modifications to make oils safer. When oils are scarce, producers can either create sustainable value chains or provide alternatives.

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## **1. Product description**

Essential oils can be produced from various plant sources, as well as from different plant parts including resins (plant exudates), leaves, flowers, fruits, bark and wood. Most essential oils are extracted using steam distillation. Other extraction methods include water distillation, expression – most notably from citrus peels (mechanically or cold pressed) – solvent extraction or enfleurage (from flowers). Extraction methods mainly depend on the raw material that is being extracted.

An essential oil is a complex mixture that may contain over 100 chemical compounds. Essential oils are colourless to pale yellow or brown and are insoluble in water. Examples include:

- flower oils, often produced by enfleurage or solvent extraction (such as rose, geranium and jasmine absolute);
- resin oils (such as frankincense and opoponax);
- fruit oils (such as citrus oils);
- leaf oils (such as patchouli or cajeput oil);
- herb oils (such as peppermint oil);
- bark/wood oils (such as sandalwood and cedarwood oils).

These oils are used in traditional medicine, the cosmetics industry and aromatherapy. The focus of this product fact sheet is on essential oils as a component in fragrances for cosmetics products (listed as "parfum" or

"aroma" on the ingredients label). According to the IFRA, fragrance blends may contain up to 250 different ingredients, which are a mixture of essential oils, natural aromatic molecules and complex synthetic aroma chemicals. A "palette" of more than 3,000 ingredients is used by the fragrance industry to create, manufacture and supply up to 80,000 unique proprietary blends.

Classification of essential oils for fragrances:

- Harmonised System (HS), as used within Europe to classify essential oils under one of the following codes:
  - $\circ~$  3301.12 Sweet and bitter orange;
  - 3301.13 Lemon;
  - $\circ~$  3301.19 Citrus fruit oils not elsewhere specified;
  - 3301.24 Peppermint;
  - $\circ~$  3301.25 Other mint oils;
  - 3301.29 Other essential oils;
  - 3301.30 Resinoids;
  - 3301.90 Oleoresins;
- botanical names and Chemical Abstract Service (CAS) Registry Numbers of various essential oils used in fragrances:
  - Lavender (*Lavandula angustifolia*), 8000-28-0;
  - Rose geranium (Pelargonium graveolens), 90082-51-2 and 8000-46-2;
  - Frankincense oil (most notably *Boswellia sacra*, *B. carterii*, and *B. frereana*), 8016-36-2;
- **CosIng**, the European Commission database of cosmetic substances and ingredients, which lists several essential oils separately under their INCI names. Examples are lavender (*Lavandula angustifolia* herb oil) with perfuming properties, blue or German chamomile (*Matricaria recutita* flower oil) with perfuming properties, and rose geranium (*Pelargonium graveolens* oil) with masking and perfuming properties;
- UN numbers:
  - Frankincense oil, UN 1993, Class 3, Packaging group III;
  - Lavender oil, UN 1169, Class 3, Packaging group III;
  - Rose geranium oil, UN 3082, Class 9, Packaging Group III.

## Quality

- According to industry sources, the quality of essential oils for fragrances depends on both sensory properties and quality consistency. It also depends heavily on the cultivation practices of the plant material and, as well as on climate and soil types. Maintaining a constant quality for the essential oils requires expertise and experience in both cultivation and processing so as to achieve adequate product standardisation and appropriate product specifications.
- Specifications for various internationally recognised essential oils exist for the oils' composition and the minimum content of some compounds. Buyers may also have their own specifications.
- Additionally, added value can be found in the origin story and colour of the essential oil.
- Buyers require a product of a consistent quality. They prefer a large volume with a consistent quality level over smaller batches of different qualities.
- To be of optimum quality, essential oils for fragrances must be 100% natural (in other words, not adulterated through the addition of any chemicals) and 100% pure (in other words, not mixed with or infused in any other oils that have similar characteristics).
- The safety of essential oils is key for their use in cosmetics. To that end, the European Commission as well and the international trade body, International Fragrance Association (IFRA), identify the maximum quantity of components in various essential oils. Examples include Citralcitral, linalool and limonene in essential oils such as palmarosa, bergamot and petitgrain; Eugenol in ylang-ylang and myrrh essentials oils.
- Furthermore, European legislation specifies the maximum concentration levels in cosmetic products for certain components of essential oils (such as citral) known to be allergens. If the maximum level is exceeded for a specific component, that component must be indicated in the ingredients list.

- Minimise the time between harvesting and distillation to prevent quality deterioration. This process means that you must, for example, improve the efficiency of your logistics in terms of harvesting and transport to distillation sites or improve storage conditions when raw materials cannot be processed immediately.
- Use the extraction method (temperature, pressure, time) that is consistent with a buyer's preferences and specifications. Where available, refer to international specifications as a baseline reference.
- Collaborate with a local university department or laboratory to determine the composition of your essential oil. Compare the result with international specifications and those of prospective buyers to analyse the oil's quality. Additionally, they can help in identifying allergens and other risks, which are a vital factor for essential oils in fragrances.
- Include information on the chemical profile of the oil, as determined by accredited laboratories, in your Product Fact Sheet and specifications. Include information on allergens in an allergen declaration, as outlined in the following section on labelling.
- With respect to new essential oils, perform a feasibility study to determine whether your oil has sufficient potential on the market, examining fragrance profile, safety and market opportunities (this information should also be based on price and availability). You must determine whether the oil fulfils a market need. If that situation is not the case, the essential oil should not be considered. Even when it is the case, introducing a new oil to the market is expensive and does not provide any guarantees of market uptake. In all cases, even for oils that might not be new but that are less frequently used, partnerships are vital.
- Avoid dilution, adulteration (for instance with cheaper essential oils or synthetics) and contamination by foreign materials in order to maintain your reputation. Importers regularly analyse products to check for adulterants.
- Always ensure that you can offer a standardised product with well-defined specifications. Standardise your product's quality by blending oils from different crops (such as early and late crops, or different slopes/areas), and by closely monitoring cultivation and harvesting practices.
- For more information on specific essential oils for cosmetics, see our study on rose geranium oil. For essential oils for flavouring that are also used in cosmetics, see our study on essential oils for food.

## Labelling

- Facilitate the traceability of individual batches with markings and a registration system, whether or not they are produced by blending.
- Labelling must be in English, unless your buyer has indicated otherwise.
- Labels must include the following:
  - product name/INCI name;
  - batch code;
  - $\circ~$  place of origin;
  - name and address of exporter;
  - $\circ~$  date of manufacture;
  - best-before date;
  - net weight;
  - $\circ\;$  recommended storage conditions.

Figure 1: Hazard labels

• Specifically for organic products, add the name/ or code of the inspectorate and the certification number.

- Ensure that the buyer has access to the following documentation:
  - Technical Data Sheet (TDS) or specification, including CAS number. See this this example for patchouli oil.
    With new oils, exporters will need to apply for a CAS number;
  - $\circ\;$  certificates of analysis to support the claims of the specifications, for which see the above examples;
  - Safety Data Sheet;
  - GMO certificate (if requested);
  - certificate of origin;
  - product information sheet;
  - allergen declaration, check some examples for more information, such as for eucalyptus oil or clove bud oil.
- Various essential oils are classified as hazardous (for example, carrot seed oil or frankincense oil); include the relevant hazard symbols (as shown in Figure 1 above) to indicate that the oil is flammable or harmful (Xn). Also include relevant risk and safety phrases.
- See EU Directive 2001/59/EC for information on risk and safety phrases.
- See our study on our study on buyer requirements for natural ingredients for cosmetics for information on classification, labelling and packaging (CLP).

## Packaging

- Always ask your buyer for their specific packaging requirements.
- If your essential oil is hazardous and has a UN number, use UN-approved packaging. For more information, see the UN Recommendations on the Transport of Dangerous Goods.
- Ensure the quality of essential oils is preserved by:
  - using containers made of a material that does not react with the oil's components (such as, lacquered or lined steel or aluminium);
  - cleaning and drying the containers before filling them with essential oils;
  - filling the headspace in the container with a gas that does not react with the oil's components (such as, nitrogen or carbon dioxide).
- Ensure that packaging materials can be reused or recycled by, for example, using containers made of recyclable material (such as, metal for resin essential oil).
- Store the containers in a dry, cool place to prevent quality deterioration.
- Physically separate organic essential oils from conventional essential oils.
- See our study on our study on buyer requirements for natural ingredients for cosmetics for information on classification, labelling and packaging (CLP).

## 2. What is the demand for essential oils for fragrances on the European market?

Trade statistics included in this segment refer to the major essential oils imported into the EU, based on specific HS codes. These oils are further specified as oils of orange, lemon, other citrus fruits, peppermint, other mints, oils not elsewhere specified (n.e.s.) and resinoids.

Please note that essential oils are not only imported for cosmetic use but also for food and for pharmaceutical use. The highest volumes are used in the food industry. The greatest range is used in the cosmetics industry, but there are often no specific HS codes for these oils. In addition, essential oils in cosmetics are also used for purposes other than for fragrance (such as for aromatherapy or anti-microbial properties). So care must be taken when drawing conclusions based on the figures below with respect to the imports of cosmetics ingredients.

## The European market for fragrances in cosmetics

There are growing opportunities for producers of essential oils on the European market, as these oils are used as fragrances in both natural certified and conventional, non-certified cosmetics.

Various market research organisations expect a strong growth in the global market for essential oils. Projections

from Allied Market Research and Stratistics MRC point to an expected annual growth in demand of 8.7% and 11.7% from 2016, to reach \$ 11.1 billion in 2022 and \$ 12.9 billion 2023, respectively. Europe is the leading market for these products, accounting for 43.5% of the global demand in 2015. The growth on the European market is driven by a high demand for food and beverages as well as natural personal care products.

You will find good opportunities for natural fragrances in Europe especially, although these fragrances represent a small percentage of the market. Europe is the largest market for natural fragrance ingredients and will continue to be an important driver for the global demand for natural fragrances. Transparency Market Research estimates that the European market amounted to just over \$ 1 billion in 2016. The global market for natural fragrance ingredients amounted to \$ 3.7 billion in 2017, and is expected to grow by 6.8% annually, reaching \$ 5.5 billion in 2023.

### Imports

Over the last five years, the value of essential oil imports in Europe grew considerably at 12% annually between 2013 and 2017. By comparison, the growth of the overall cosmetics market in Europe has been mostly flat over the same period. The volume of imports fluctuated with a peak in 2015, after which imports returned to 2013 levels. Imports reached almost 90,000 tonnes in 2017, with a value of  $\in$  1.9 billion.

Developing countries play a relatively large role in the supply of essential oils, supplying 45% of the total European imports in 2017.

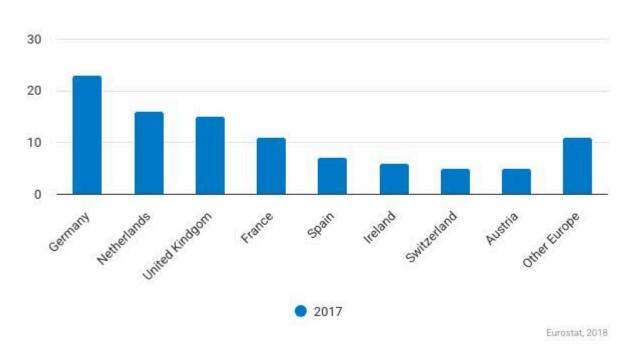
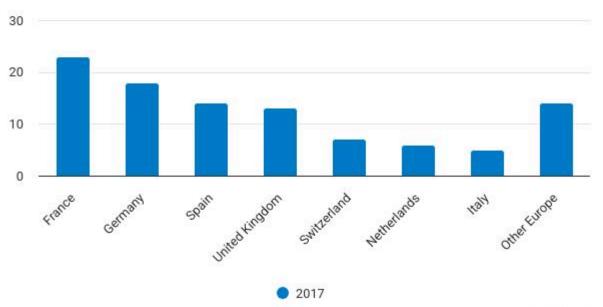


Figure 2: Leading European importers of essential oils

in share of total volume (90,000 tonnes)



#### Figure 3: Leading European importers of essential oils not elsewhere specified

in share of total volume (19,000 tonnes)

Eurostat, 2018

Figure 2 gives an overview of the leading European importers of all essential oils in 2017, while figure 3 gives an overview of leading European importers of essential oils not elsewhere specified (see HS codes under the section 'product description'). Essential oils in cosmetics mostly come from the latter group. Among the importers in figures 2 and 3:

- Germany is a major and stable importer of orange, peppermint and other mint oils. These oils are commonly used in the food industry. Just as the rest of Europe, Germany's imports of orange oil increased substantially in value (14% annually in the past five years) due to the rising prices of orange oil;
- France is a major importer of oils that fall within the HS code "not elsewhere specified", in particular highervalue oils used in cosmetics. This product group includes a wide range of oils such as rosemary, litsea cubeba, tea tree, ylang-ylang and chamomile. In 2017, France accounted for 23% of the total European imports in volume and for 32% of the imports in value. The French market is particularly appealing for speciality oils used in the cosmetics sector and acts as a hub for the industry across Europe
- Ireland is the main importer of lemon oils. After a strong decrease in 2014, Irish lemon oil import volumes almost returned to the levels of 2012. Developing countries are important suppliers to Ireland, making up 80% of the country's supplies in 2017. Irish imports of citrus fruit oils excluding lemon and orange oils increased by 18% annually, making Ireland the second largest importer of these oils after the United Kingdom;
- The United Kingdom plays a large role in imports of oils from citrus fruit excluding lemon and orange oils, oleoresins, peppermint and other mints. Over the last five years, import volume of these oils has been relatively stable, while value of imports increased. Import value of citrus fruit excluding lemon and orange oils experienced the strongest growth at 9% annually. Around 40% of these imports originate in developing countries;
- The Netherlands is a strong importer of orange and other citrus oils. For both product groups, the Netherlands sources many of these oils directly from developing countries. Over 90% of its orange oils originate in developing countries and 62% of its other citrus oils (excluding orange and lemon).

## Tips:

- Focus on the main importing countries mentioned in figures 2 and 3 when it comes to your specific essential oil. However, also expect greater competition on these markets.
- Consider other, smaller markets based on a feasibility study. These markets are still large enough for

small and medium-sized enterprise (SMEs) that wish to enter the export market.

• Conduct additional market research for more insight into the differences between the countries mentioned above and the trade in citrus oils, mint oils and oleoresins. Use free statistical databases such as ITC Trademap or the Trade Helpdesk from the European Commission. Look for trends on websites such as Cosmetics Design Europe.

From 2013 to 2017, the strongest annual growth in European imports of essential oils was:

- citrus oils excluding orange and lemon (5% in volume and 16% in value)
- oils not elsewhere specified (3% in volume and 13% in value)
- orange oils (2% in volume and 27% in value)

In the same period, the import volumes of oleoresins, lemon oils and peppermint oils decreased slightly, between -1 and -4% annually. A change in demand for these oils does not necessarily imply an increase or decrease of their use in cosmetics. Citrus fruit and mint oils are used more extensively for food applications than in cosmetics.

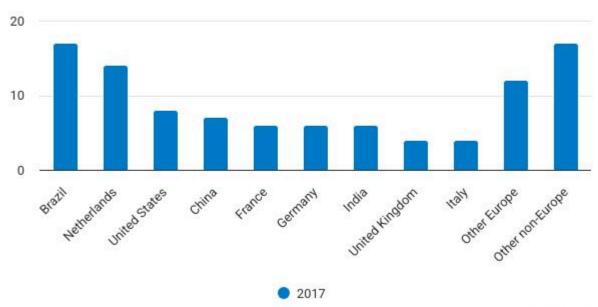


Figure 4: Leading suppliers of essential oils

in share of total supply (90,000 tonnes)

Eurostat, 2018

The primary suppliers of essential oils to Europe (Figure 4) are further specified in Table 1, including the share of their main products in the total European imports. These suppliers can be strong competitors. However, some of the European countries mainly act as re-exporters and can be interesting traders to get your essential oils on the European market.

You will find good opportunities on the European market for essential oils that have limited production in Europe. Such oils include orange (if you can supply large volumes), "other mint oils" and essential oils not elsewhere specified (n.e.s.). In 2017, developing countries played the largest role in these essential oils. Competition from European sources may be more limited for these products, but you will compete with other producers (see Table 1).

One or two countries dominate the supplies of most of the product groups in Table 1. This fact indicates that it may be difficult for producers in other countries to compete on these markets. The issue of "appropriate" origin is also important. Which products do buyers and consumers expect to come from a particular country? Will they accept those oils to come from another country?

#### Tip:

• Be aware that citrus and mint and citrus oils are established markets that may be difficult for new entrants to access. Refer to the Competition section for more information.

Table 1: Main suppliers of essential oils to Europe

Supplier	Type of supplier	Main product	Share of total European imports (volume)
Netherlands	Re-exporter	Orange	31% - 10,000 tonnes
Germany	Re-exporter	Orange Oleoresins	4.2% – 1,300 tonnes 9.1% – 2,000 tonnes
France	Producer/ re-exporter	Essential oils n.e.s.	12% – 2,200 tonnes
Italy	Producer/ re-exporter	Lemon Other citrus oils	22% – 1,300 tonnes 12% – 600 tonnes
Brazil	Producer	Orange	41% - 13,000 tonnes
United States	Producer	Peppermint oil Mint oils n.e.s.	38% – 700 tonnes 16% – 450 tonnes
India	Producer	Peppermint oil Mint oils n.e.s.	31% - 600 tonnes 51% - 1,500 tonnes
China	Producer	Mint oils n.e.s. Essential oils n.e.s.	16% – 450 tonnes 24% – 4,600 tonnes
Indonesia	Producer	Essential oils n.e.s.	8.8% – 1,700 tonnes
Madagascar	Producer	Essential oils n.e.s.	4.3% – 800 tonnes
Argentina	Producer	Lemon oils	30% - 1,740 tonnes

Mexico Producer ()ther citrus ous 16% - 800 tonnes	4	Duri		1.00/ 0.00 1.000
	1exico	Producer	Other citrus oils	16% - 800 tonnes

Even though France is a relatively small supplier in terms of volume (6% in 2017), it is the second-largest supplier of essential oils when it comes to value. In 2017, French supplies accounted for 9.8% of the value of European imports, just after the United States (10%). This figure indicates that France is an important trader in high-value essential oils.

Other European suppliers include:

- Netherlands
- Germany
- United Kingdom
- Italy
- Spain
- Poland
- Belgium

Source: Eurostat (2018)

#### Tips:

- Analyse the export data of countries that produce similar or competing essential oils. In many cases, more detailed and more specific export statistics are available from local statistics offices. Check, for example, the websites of the Department of Commerce in these countries.
- To reduce competition from large suppliers, focus your production on essential oils that are not manufactured in these countries. Determine to which resins you have access in your specific region.

#### **Exports**

You can expect competition from Europe, as it is also a strong producer of certain essential oils such as lavender, citrus oils, coriander and rosemary. See our study on Competition for natural ingredients for cosmetics for additional information.

European exports reached 58,000 tonnes in 2017, with an average annual increase of 2% since 2013. The value of exports rose by an average 15% annually in the same period, reaching  $\in$  1.6 billion in 2017.

The largest European exporters in 2017 were, in percentage of export volume:

- Netherlands (21%)
- United Kingdom (13%)
- Germany (13%)
- France (12% largest exporter in export value at 26%)
- Spain (11%)

Together, these countries accounted for 70% of the 2016 European exports.

The main export destinations were:

• in Europe, mainly Germany, France and the United Kingdom;

• outside Europe, mainly the United States, China and Japan.

## 3. Which trends offer opportunities on the European market for essential oils for fragrances?

### Safety

Consumers, cosmetics manufacturers and regulators in Europe are increasingly demanding safe products sourced through known, verifiable supply chains, while also demanding proof of safety for essential oils for fragrances. Whilst the safety of traditional essential oils is well known, introducing new essential oils into the market is very difficult, precisely due to safety concerns. Furthermore, the existing palette of essential oils can already cover the needs of the fragrance industry.

Even the traditional essential oils are undergoing more scrutiny. European buyers anticipate stricter legislation on allergens in the future (see our study on buyer requirements for natural ingredients for cosmetics). Removing allergens from essential oils while maintaining their natural status possibly offers opportunities for innovation and might make those oils "safer". However, because this process will change their odour, it will not be feasible for all essential oils used as fragrances. What might happen, in all likelihood, is that essential oils with components considered as allergenic will be used at lower concentrations.

### **Tips:**

- If you can describe the origin and properties of your ingredient in detail, use this information in your marketing materials and product specifications. This aspect can add value to your product.
- See our study on buyer requirements for natural ingredients for cosmetics for more information on upcoming allergen legislation.

## **Trends in fragrances**

Suppliers of essential oils used in fragrances may only have an indirect influence on the final composition of the fragrance, but it is still important to stay up-to-date on trends and developments. Currently, natural and light fragrances are popular, but this trend may change in future. The market for fragrances is marketing-oriented, where differing trends across segments and brand categories are very common. Example of past trends include "sea breeze", "fruit-oriented", "unisex" and "woody".

## **Tips:**

- Stay up to date with the types of fragrances which are driving demand. Use websites/trade periodicals such as Cosmetics Design Europe, SPC Magazine and COSSMA Magazine to look for new cosmetic products. Bear in mind that fragrances are complex blends and that an individual essential oil is complemented by up to 200+ other compounds to produce the desired fragrance.
- Study a Fragrance W

## Fragrances with aromatherapeutic benefits

Additional opportunities for essential oils in cosmetics lie in soft aromatherapy, where products are marketed as having additional aromatherapeutic benefits such as uplifting or calming effects.

- Do not make a claim that your oil has health or medicinal benefits; this point is particularly important for cosmetics with aromatherapeutic properties. Choose your words very carefully when describing the benefits of your product or ingredient in order to avoid claims of medicinal properties, since such claims are much more strictly regulated than those for cosmetic benefits.
- For more information on cosmetics with an aromatherapeutic benefit, refer to the CBI Product Fact Sheet Essential oils for aromatherapy in Europe.

## Natural vs. synthetic

In Europe, there is an increasing public perception that natural ingredients are better and safer than synthetic alternatives in cosmetics. This trend has translated into a growing market for natural cosmetics. As a producer of natural ingredients, you can also find growing opportunities on the European cosmetics market. There are opportunities for both certified natural and conventional cosmetic products with a high proportion of natural ingredients. Although essential oils are 100% natural, there is continuing research into the safety of these natural chemicals, especially on the risk of allergic reactions.

According to the Kline group, the natural cosmetics market amounted to \$ 33 billion globally in 2015 ( $\notin$  29 billion). That makes up 13% of the total cosmetics market (Brands with a Conscience, Ind & Horlings, 2016). This market is predicted to grow to \$ 50 billion ( $\notin$ 44 billion) in 2019.

## Tip:

• When exporting, focus on the perceived consumer benefit of natural ingredients over synthetic alternatives. This aspect is of particular relevance to high-value oils.

## Artisanal

Artisanal fragrances offer a niche market for essential oils, especially with specific perfume makers. This opens particular opportunities when it comes to high-value essential oils as well as flower essential oils produced by enfleurage.

## **Exotic ingredients**

The ongoing consumer interest in speciality exotic ingredients provides an opportunity for essential oils from regions that have "exotic", "mystical" or "luxurious" connotations. Examples include oils from the Amazon such as copaiba oil, or Indian sandalwood oil.

## Tip:

• When it comes to exotic essential oils, focus on the area of origin or the tradition of cultivation/collection, which will be beneficial to your marketing.

## Sustainability

Sustainability is of increasing importance to essential oils for fragrances. This aspect plays a role in the

manufacture of essential oils in terms of their harvesting and extraction. It may be easier to demonstrate sustainability in terms of social and environmental aspects if you obtain certifications (for instance, Organic, FairWild or Fair Trade) or membership to sustainability organisations like the Natural Resources Stewardship Circle (NRSC). Please note that certified sustainable perfumes remain a rarity. However, certification is important in other cosmetics segments such as hair care and – especially – skin care.

#### **Tips:**

- Check whether you can obtain certifications for ethical sourcing. See the sections on Additional Requirements and Market Segments for more information. Work closely with buyers to assess the market value of certification.
- In addition to certifications, focus on the story behind your essential oil in your promotional material. It is an advantage to help cosmetics producers communicate these stories; for example, by providing photos.
- See our study of Trends for natural ingredients for cosmetics for more market trends.

## 4. Which requirements should essential oils for fragrances comply with to be allowed on the European market?

## **EU Cosmetics Regulation**

The Cosmetics Regulation includes requirements (physical-chemical, microbiological and toxicological) for substances/ingredients to be included in each "Cosmetic Product Safety Report" and "Product Information File". Cosmetics manufacturers and ingredient producers are increasingly making compliance with this regulation the responsibility of their suppliers.

#### **Tips:**

- Check with your buyers what information they require and in which format.
- Comply with relevant legislation. Read more about the marketing conditions for cosmetic products and the Cosmetics Regulation on the Trade Helpdesk from the European Commission.
- See our study on buyer requirements for natural ingredients for cosmetics for a full list of requirements for cosmetic ingredients.
- See our workbook on preparing a technical dossier for cosmetic ingredients for more information and tips.

## **Registration, Evaluation and Authorisation of Chemicals (REACH)**

In principle, essential oils are bound by the legislation on chemical substances. Therefore, with few exceptions, they need to be registered with the European Chemicals Agency under REACH (Registration, Evaluation and Authorisation of Chemicals) legislation. If volumes imported into Europe remain under 1 tonne per importer per year, registration is not required, except for the most hazardous chemicals. In all cases, the burden of proof lies with the EU manufacturer or importer that wishes to employ this exemption (an absence of information on the properties of a substance does not mean an absence of hazardous properties). The importer or manufacturer will rely, in many cases, on information from suppliers.

- Familiarise yourself with REACH regulation; Annexes IV and V list details of exemptions from registration. The European Chemicals Agency (ECHA) offers guidance on exemptions.
- Check the REACH registration status of your essential oil. If your product is not registered, it may need to be (subject to exemption status). REACH registration is an expensive procedure and must be initiated by European manufacturers, EU importers or by an Only Representative of a non-EU manufacturer (hazardous chemicals imported or manufactured in large volumes have to registered as a priority).
- Consider joining a consortium to obtain the registration number for a particular essential oil. In effect, this makes you a supplier within Europe supplying downstream users directly, rather than an exporter to Europe selling to an intermediary within that consortium. Whether this is an effective marketing strategy depends on the cost of buying into the consortium and the volume you want to sell. It could cost many thousands of euros to join a consortium.

## Classification, Labelling and Packaging of chemicals (CLP)

The EU sets the requirements on the packaging of chemical substances, as well as the required symbols and phrases to warn users and provide safety advice which must be used on the labels. These requirements have been adopted from the United Nations' Globally Harmonised System (GHS).

#### **Tips:**

- Use the database on classification and labelling on the ECHA website to determine which symbols and warning phrases apply to your product.
- See the website of the European Chemicals Agency for more information on REACH and CLP.

Potential upcoming changes in legislation for fragrance allergens in cosmetic products: The European Union Cosmetics Regulation lists 26 fragrance allergens with a well-recognised potential to cause allergy. Cosmetic products need to include these allergens in the list of ingredients when their concentration exceeds 0.001% for leave-in products and 0.01% for rinse-off products.

However, in 2012, the Scientific Committee on Consumer Safety (SCCS) published an opinion on perfume allergies. The SCCS concluded that the current regulations on fragrance allergens are insufficient. They identified more than 100 additional individual substances, including components of natural extracts as probable contact allergens. The SCCS recommends that consumers should be informed of whether cosmetic products include these additional allergens as well.

As a result, European buyers expect new, stricter legislation on the testing and communication of fragrance allergens. This process could include adding more allergens to the existing lists and requiring a list of all these allergens on packaging.

In particular, buyers expect that these new rules will have a negative effect on the demand for essential oils in cosmetics. Cosmetics producers may use fewer essential oils in their products to avoid long lists of allergens on their final product. Alternatively, they may use synthetic ingredients instead of natural ones.

- Keep up to date with European allergen legislation. Stay informed through your own national sector association or check the International Fragrance Association website.
- See our study on buyer requirements for natural ingredients for cosmetics for additional information.
- See our workbook for preparing a technical dossier for more information and examples of allergen declarations for the current 26 allergens.

## Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

CITES regulates the trade in endangered plants and plant products collected in the wild (among other things) and provides a detailed list of species for which trade is prohibited, restricted or bound by certain rules. If your product is listed in Annex A or B of Regulation (EC) 338/97, you must obtain export and import permits before you can export it.

#### **Tips:**

- Check in the Annexes whether import and export permits are required for your product. Another resource is the CITES Checklist. You can also contact your local CITES authority for more information.
- Read more about CITES on the Trade Helpdesk website.

### Access and Benefit-Sharing (ABS)

You also need to comply with requirements derived from international treaties on using plant resources.

The Nagoya Protocol provides guidelines for accessing and utilising genetic resources and traditional knowledge and the fair and equitable sharing of the benefits, called Access and Benefit-Sharing (ABS) when activities fall within scope of the legislation. In such cases, European companies are legally required to ensure that the ABS legislation has been followed in the country of origin, and downstream to their businesses.

The European Union has translated guidelines on ABS into European law. Most likely, these are also part of your national law.

#### **Tips:**

- Put a procedure in place to check whether ABS applies to your essential oil.
- Check the specific ABS regulations in your country.

## Quality

European buyers expect a good and reliable level of quality. Most buyers expect suppliers at least to follow the Hazard Analysis and Critical Control Points (HACCP) principles for food processing. The following requirements are also frequently imposed:

• Good Manufacturing Practices (GMP) are not obligatory for producers of cosmetics ingredients, but compliance can provide a competitive advantage.

- Good Agricultural and Collection Practices (GACP), even though legally binding for medicinal plants only, are also recommended for the farming and wild collection of cosmetics ingredients prior to processing.
- Product standards for essential oils under the International Organization for Standardization (ISO) are referred to in the product specifications of buyers so as to assure the quality of cosmetics ingredients. Moreover, even though intended for finished cosmetics, the cosmetics manufacturing standard ISO22716 also includes guidelines for ingredients to which manufacturers must refer.
- The International Fragrance Association (IFRA) Standards are the basis of the globally accepted and recognised risk management system for the safe use of fragrance ingredients, including various essential oils.
- Buyers will also have their own requirements.

- At the very least, follow Hazard Analysis and Critical Control Points principles.
- Ascertain whether you can help your buyer to comply with GMP principles for producers of cosmetics. This process may give you a competitive advantage. The guide developed by the European Federation for Cosmetic Ingredients (EFfCI) gives a highly detailed explanation of these principles based on ISO 9001.
- Comply with the World Health Organisation's GACP guidelines, even though they are only legally binding for medicinal plants. Compliance gives you a competitive advantage from a marketing perspective.
- For compliance with the IFRA Standards, refer to the IFRA Code of Practice, which lists information on specific requirements and practices.

#### **Sustainability**

European buyers prefer suppliers that can demonstrate good standards in respect of sustainability. This process involves social and environmental responsibility as well as sustainable sourcing practices. Buyers may not require compliance with certification standards to prove sustainability, but they are looking for suppliers who can demonstrate that they have incorporated sustainability into their operations.

#### **Tips:**

- Assess your performance on sustainability in terms of sourcing, social and environmental responsibility. Demonstrate to your buyers how you have incorporated sustainability into your operations.
- Prepare and publish a code of conduct that defines your social and environmental responsibilities, both as an employer and a supplier.
- Look into social responsibility platforms such as the Supplier Ethical Data Exchange (SEDEX), which provide a template of the typical information required. They also facilitate the sharing of this information with potential customers.

#### **Documentation**

Buyers need well-structured product and company documentation. They generally require detailed specifications supported by certificates of analysis and Safety Data Sheets (SDS). Documentation must include information on allergens. An allergen declaration for essential oils must be composed in accordance with the Cosmetics Regulation and IFRA standards.

The European Union is still deciding on new rules for allergens, which could negatively affect the demand for essential oils. This legislation could include more allergens than included in existing legislation and require cosmetic producers to list these allergens on their packaging. Currently, perfume and its raw materials are listed as "perfume" or "aroma". To avoid having to publish long lists of allergens, cosmetic producers may use fewer essential oils.

#### **Tips:**

- Create a commercially oriented Product Data Sheet containing photos for your buyers, information on the product's origin and bibliographic references, where available. For your own internal purposes, prepare a more detailed dossier containing all the technical data from both primary and secondary research.
- Consider seeking qualified advice in preparing an SDS. Check the websites of European companies for examples of an SDS, such as Oils For Life.
- See our Workbook for preparing a technical dossier for cosmetic ingredients for additional information and documentation requirements.

## Additional requirements Natural cosmetics

In cosmetics, the definition of natural cosmetics has been driven by private-sector standards, specifically NaTrue and Cosmos. These standards specify what cosmetic products need to comply with in order to be certified natural and Organic. Natural cosmetics are often defined as containing a certain amount of natural ingredients. Although not directly applicable to ingredient producers, it is important to be aware of these standards in terms of permitted processes and additives.

An alternative minimum self-certifiable standard is ISO 16128 standard part I and part II, which cover definitions and criteria for natural and organic cosmetic ingredients and products. Buyers of cosmetic ingredients expect that private-sector standards will continue to remain the standard for natural and organic cosmetics in Europe, until Europe introduces legal standards. However, the ISO standards are an option for small producers for whom certification is too expensive.

## Organic

European legislation specifies what organic production and labelling entails. This legislation is only applicable to food products, but it also forms the basis of private standards for organic labelling. Soil Association (the United Kingdom) and Ecocert (France) also certify according to the Cosmos standard for natural and organic cosmetics. BDiH (Germany) also has its own standard.

## **Fair production**

Several standards exist for certifying the socially sustainable production of natural ingredients for cosmetics. Examples of consumer labels that guarantee fair social practices include Fairtrade and FairWild (wild-collected ingredients).

#### **Tips:**

- For more information on market opportunities for certified Organic or socially sustainable essential oils, please see the section on Market trends.
- Refer to the Standards Map database from the International Trade Centre for further information on various voluntary standards and their requirements, including organic and fair production.

- Please be aware that the above certifications for natural cosmetics and, in particular, for organic and fair production are less relevant to the essential oils used in perfumery. They are of interest for essential oils used as fragrances in cosmetics such as skin or hair care products.
- Follow the development of the second part of the international standard for natural and organic cosmetics.

# 5. What competition do I face on the European market for essential oils for fragrances?

## Market entry

- The best opportunities on the European market are for pure oils of consistent quality. Cosmetics manufacturers who use essential oils as fragrances require stable oil supplies of consistent quality and sensory profile. However, the supply of essential oils can vary in both quantity and quality (including sensory properties), depending on the conditions of cultivation and harvesting, the country of origin and the production process. Variations in the supply of wild-harvested essential oils are even greater.
- Certain essential oils such as lavender, citrus and mint oils are traded in large volumes, and constitute established and competitive markets. Substantial amounts of these oils are produced in European countries. It may be difficult to enter these large, established markets.
- If the raw materials for essential oil production are wild-collected, they can become scarce and expensive if they are overharvested, as has been the case for Indian sandalwood and frankincense.
- Applying sustainable resource management to the collection process is a way of ensuring sustainable supplies. It is not always necessary to have the essential oils in question certified; in some cases, resource mapping and the formulation of a resource management plan may be sufficient.
- Most essential oils for fragrances are produced with the aid of steam or water distillation. This production method requires less know-how than solvent extraction. As a result, the technological barriers to market entry for such oils are relatively low.
- Some essential oils must be obtained by means of solvent extraction, as is the case for many flower absolutes such as jasmine and rose absolute. This process may require substantial investment. The type of equipment and the specific technical know-how needed to ensure the required product quality depend on the complexity of the extraction process.

#### **Tips:**

- Stabilise your supply of essential oil; for example, by closely monitoring the cultivation and harvesting of the raw material. If your essential oil is wild-collected, collaborate with collectors to stabilise supplies. This process also demonstrates your commitment to a long-term trade relationship.
- Gain control over the harvesting of wild-collected plants for essential oils.
- If you supply wild-harvested raw materials, apply sustainable resource management to their collection. Look into the possibilities of FairWild certification to show sustainability. Always discuss this option with your buyers first to ascertain whether they regard such certification as important or whether they would be satisfied with resource mapping and management.
- Determine which extraction method is required for the essential oil and which investments have to be made in order to implement it. Also determine whether these investments are viable given the size of your raw material base. If significant investment is required, cooperate with other producers of essential oils to share the costs.
- Reduce your dependence on one single essential oil and use your equipment efficiently. Once you have mastered the distillation of material from one plant, the same equipment can be used to distil material from other plants.
- For more information and tips, see our Tips for doing business.

### **Product competition**

With regard to the major essential oils, the threat of substitution by synthetics is at present not particularly high. Companies that wish to use synthetics for economic reasons already do so; those using essential oils will not readily switch to synthetics, as essential oils are seen as a source of "naturalness". These oils are in a separate product category, except for those natural essential oils used to extract higher-value fragrance components.

Another point in favour of a number of essential oils for fragrances comprises their sensory properties. Particular essential oils such as myrrh have a fragrance that is harder to reproduce synthetically. As a consequence, these essential oils are less susceptible to substitution with synthetic counterparts.

### **Company competition**

In general, commodity oils face a higher threat of competition and buyers have greater powers when compared to speciality oils. Producers of essential oils for fragrances can improve their competitive position by adding value to their products. This process includes focusing on the oil's sensory properties, origin story and colour, as well as on the specifications that are popular in fragrances.

According to industry sources, innovations exist that can also improve a company's competitive position. In the field of essential oils for fragrances, these innovations can be found in producing absolutes that last longer, as well as reintroducing traditional and new extraction methods such as enfleurage or alternatives to the solvent extraction process. Moreover, there is a potential for technically reworked oils (for example, by removing colour or allergens), as long as the oils can still be classified as natural ingredients. Whereas a product still retains its "naturalness" in terms of REACH if it is physically modified, it must be registered when it is chemically modified.

#### **Tips:**

- Determine your capacity for innovations in the production of essential oils.
- Be aware that new types of essential oils require significant investments in terms of additional testing before they can be used for cosmetics products.
- See our study of Competition for natural ingredients for cosmetics for additional information.

# 6. What do the trade channels and market segments of interest to essential oils for fragrances in Europe look like?

#### **Market channels**

See our study of Market channels and segments for natural ingredients for cosmetics for an overview of market channels, segments, trends and developments.

## No further processing required

As essential oils are exported in the form of oil, they generally do not require further refining or processing before they can be used for cosmetics products, provided they meet the quality expectations. Nevertheless, the fragrance industry plays a role in combining different essential oils and fragrance compounds into fragrance ingredients for use in cosmetics.

Essential oils are an example of an ingredient that can be sold directly to manufacturers more easily than other ingredients, due to the small volumes required. However, it remains common for most SME exporters to export

to traders via agents or brokers.

It is not uncommon for companies in the fragrance industry to source exotic or niche essential oils directly from producers. Commodity-type oils are more often sourced from traditional intermediaries in the supply chain.

Speciality oils and certified Organic or Fair Trade oils usually have relatively short trade channels. The reason is that buyers are often interested in the source of the oils so they can use it in their marketing campaigns.

#### **Tips:**

- Take advantage of the experience and expertise of specialised European importers and agents, instead of approaching end-users directly. When exporting specialised products in particular, traders are the most suitable distribution channels. Moreover, intermediaries buy larger quantities, whereas end-users buy small quantities.
- If you produce certified essential oils, check the websites of buyers to find out whether they work with certified ingredients. Buyers that do not do so are unlikely to pay a premium for your certification.
- Visit and participate in trade fairs to test market receptivity, to obtain market information and to find potential business partners. The most relevant trade fair in Europe for exporters of essential oils is incosmetics. Other options include Beyond Beauty (Paris, France), SANA (Bologna, Italy), or Vivaness for organic producers (Nuremberg, Germany).
- Find potential buyers by identifying finished products on the market that already use essential oils. For example, check websites such as Cosmetics Analysis.
- See our study of Finding buyers for additional information.

#### **Market segments**

Figure 4: Segmentation of essential oils for fragrances

#### **Commodity versus speciality essential oils**

Essential oils for fragrances can be divided into commodity and speciality oils. Commodity oils are often noncertified oils that are traded in high volumes, such as citrus, lavender or mint oils. By contrast, speciality oils have properties that make them more unique. When used as fragrances, these products include oils with sensory properties due to their origin (such as Bourbon rose geranium oil) or certification (such as Fair Trade), and oils that are rare or traded in very low volumes (such as orris absolute).

#### **Tips:**

- For commodity oils, focus on minimising costs by rationalising production.
- For speciality oils, focus on the marketing story of the product by demonstrating the oil's uniqueness. Certifications, which are discussed below, may add to this marketing story.

Essential oils are used extensively as fragrances in the cosmetics industry, often in very small quantities. Most often, they are used in skin care products and perfumes. The products in which they are used depend on various aspects, such as sensory properties, specifications, price, maximum usage and colour. For example, German chamomile oil is blue in colour, which makes it less useable in cosmetics (although at low volumes, this

fact should not create a significant problem). In perfumery, essential oils are used as top, middle or base notes, depending on their aroma.

Consumers in both the perfumery and the skin care segments tend to be more willing to pay a higher price for products. This situation means that the relatively high price of some natural essential oils, when compared to synthetic alternatives, is less of an issue.

As stated in the Market trends section, there is a growing market for sustainably produced essential oils as fragrances in cosmetics. This market includes ethically produced and fairly traded essential oils. These oils do not necessarily need to be certified. Consumers are increasingly interested in the story behind ethically sourced and processed end products. Whether or not Fair Trade certification is necessary depends on your buyer's preferences. The buyer may require certification as a guarantee of fairly traded products.

#### Tip:

• Focus on the story behind ethical certification, and provide adequate and honest information to your buyers. In your promotional material, stress the social benefits of your production processes to local communities.

According to industry sources, there is an increased interest in Organic certified essential oils. However, this interest depends on your prospective buyer. The segments for natural perfumes and skin care products are most likely to be of interest to producers of organic essential oils. The natural perfumery market remains a niche market, mostly limited to the French, German and especially the UK market.

#### Tip:

• Discuss the potential for Organic certified essential oils with your buyers before launching a product development plan to source organic raw material.

## 7. What are the end-market prices for essential oils for fragrances?

#### A wide price range for essential oils

The prices of essential oils cover a very wide range and depend on the properties of the oil, the price of the raw material, the processing method, the oil yield and its popularity in relation to its availability.

Quality also affects price, but it is a subjective factor. You need to comply with legal requirements as a minimum quality standard. Beyond that, your buyers will decide how they define "high quality". For example, in terms of the composition or properties they are looking for. You need to find a buyer who values what you can offer and who is willing to pay more than other importers.

According to industry sources, orange oil is one of the cheapest essential oils at \$ 10-12 per kg. The price of this oil increased from around \$ 3 per kg to \$ 15 per kg in 2014, due to a drop in supplies after a drought in Brazil, one of the main producers of orange oil.

The price for lavender, also used extensively as a fragrance in cosmetics, varies depending on the source.

Bulgarian lavender is currently the most expensive lavender, for example, priced at  $\in$  140–150 per kg after recent droughts. French lavender, on the other hand, costs around  $\in$  100 per kg, according to industry sources. More expensive essential oils include rose oil ( $\in$  8,000–9,000 per kg) and sandalwood (around \$2,300–2,500 per kg).

Alternatively, orris absolute (produced from *Iris pallida, I. germanica* or *I. florentina*) is traded at prices of up to  $\in$  100,000 per kg, depending on the composition. Due to its high price, this latter product is most commonly used in high-end perfumes, though at very low concentrations.

#### **Tips:**

- Calculate your production costs by using a detailed cost breakdown. Do not forget to include additional costs such as customs, loading/unloading, marketing, samples for chemical analysis and internal transport. Add your profit margin to the cost breakdown result to achieve the selling price.
- When pricing your product, consider the maximum price that the market is willing to pay for your product, plus the existing demand, your cost analysis and break-even analysis. Ensure that the price reflects the quality levels and delivery conditions.
- Monitor the harvests of your specific essential oil in major production countries to anticipate pricing developments. Changes in production levels within these countries can affect global prices, as in the case of Brazilian orange oil mentioned above. Such information is generally available from importers.

The following price breakdown shows which costs and margins are applied to low-volume and high-value essential oils for fragrances before they reach the end-user. If essential oils are traded in volumes large enough to fill a container (15–20 tonnes), sea freight is the most common method of shipping. Low-volume essential oils are commonly transported as air cargo; due to the high values of these oils, the mark-ups of expensive air cargo are relatively small.

Figure 6: Indicative price breakdown (mark-ups) for low-volume essential oils for fragrances, in %

Source: Profound, 2018

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