



F.D. COPELAND & SONS LTD

Essential Oils  
Natures Flavours  
and Fragrances



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Established in 1937, F.D. Copeland and Sons Ltd is a leading essential oil company offering a mix of traditional core values coupled with innovative and creative solutions.

“Essential oils” are natural oils extracted from plants or fruits by either cold pressing or steam distillation at origin. The company further processes these oils by cleaning, fractionating, concentrating and blending to create unique natural blends or flavours 100% from source, just as nature intended.

We offer an extensive portfolio of quality essential oils, specialising in all Peppermint, Spearmint, Citrus, Aniseed, Eucalyptus, Spice and Herbs, which are individually sourced by a team of professionals from the world’s best origins.





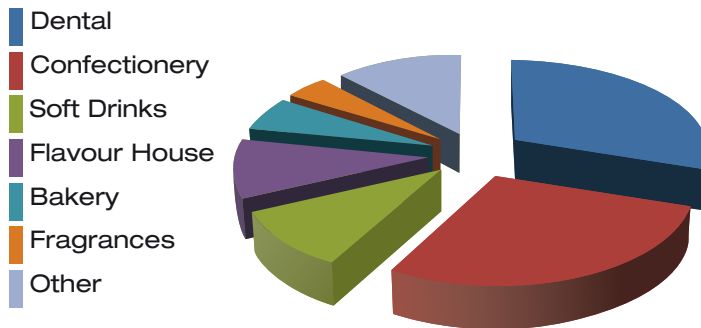
To serve our expanding global client base, in 2011 the company moved into a new purpose built manufacturing and blending facility covered by a BRC “A” category certificate and ISO 9001. Within the design, we have integrated many eco-friendly and sustainable initiatives as possible including a Packaged Air handling plant, De-Stratification fans, Heat Recovery Ventilation and Variable Refrigeration flow.

All the equipment is the highest quality 304 grade stainless steel construction. There are 15,000 kg and 4,500 kg blending tanks dedicated to mint and citrus, with a large number of smaller vessels, all with in-line filtering.

Our new facilities allows us to optimise the flow of materials through the manufacturing process within a secure environment.

The top six consumer markets for Confectionery products utilising primarily Peppermint, Spearmint or Menthol are:- The USA, Japan, Brazil, France, China and the UK. Mint and Menthol flavours (augmented by Citrus, Vanilla, Herbs and Spices) still remain the most popular in new product launches for Confectionery, Gum and Oral Care. F.D. Copeland is well placed to cover all your requirements, supported by an expert team covering the Dental, Confectionery, Food and Beverage industries.

Typical % breakdown of business by volume per industry



## Our Service



Our strengths lie in our extensive knowledge and experience in sourcing natural raw materials from reliable and reputable growers around the world. We pride ourselves in working in partnership with our suppliers to produce and offer products that meet the strictest quality standards to our global client base.

The company's ability to understand our client's technical and commercial requirements are second to none, helping to minimise response times to the customer and increase the success rate for new product launches.

F.D. Copeland offers expertise in new product development projects, cost saving initiatives, customer presentations and global trend analysis.

We have a new weekly capacity for distillation of between 25,000 and 40,000 kilos and a blending capacity of between 40,000 to 50,000 kilos. The two facilities are fed by one of the largest and varied ranges of natural essential oils with a capacity often reaching in excess of 2,500 drums. This contingency ensures continuity of quality and delivery of goods that are despatched promptly from our factory gates to our customers all around the world.

Our extensive stockholding in London ensures we can offer our clients consistent products and price stability for multiple deliveries throughout the life of any contract, despite potential seasonal variation or crop disruption.





## How We Add Value



The new manufacturing facility has been designed with particular emphasis on flows of materials, information technology and experienced personnel to stream line the overall operation.

The process area has the latest control systems to allow each individual operator to remain in the loading/packing area for the duration of every manufacturing job. Samples are taken from each individual tank, so to be fully representative of every batch. All finished product is filtered before filling into the clients packaging which can be anything from 1 kilo to 1,000 kilo IBC's.

Further processing includes full distillation of essential oils through an array of stills producing folded and fractionated products. F.D. Copeland has now significant additional capacity at its disposal to offer a comprehensive tolling service to both existing and new customers. Further equipment includes a large warming room, centrifuges and high quality filter presses to ensure the removal of naturally occurring waxes and other plant residues before delivery to the client.



**The Technical Department** - The company's new laboratories are responsible for testing all incoming raw materials and out-going finished products to ensure strict compliance to set specifications. They are built to cater for a premium level of quality examination using chromatographical checks including GC/MS/MS, GC/FID and HPLC along with extensive physical testing.

**Reach** - We are at the forefront of the challenges resulting from REACH implementation. REACH (Registration, Evaluation, Authorization & Restriction of Chemicals) is an ambitious integration of EEC chemical legislations applying to any quantities of use exceeding 1 tonne per annum. It is designed to ensure that manufacturers, exporters and downstream users of chemical substances (including some substances used in the flavour and fragrance industries) are held responsible for managing the risks associated with their use without any adverse effects on human health or the environment. Please contact [reach@fdcopeland.com](mailto:reach@fdcopeland.com) for any questions or concerns that you may have.





Essential oils offer the perfect “Natural” flavouring solution in the production of finished products for the Confectionery, Chocolate, Chewing Gum, Candy, Oral Care, Bakery and Soft Drinks industries.

Our oils are blended to enable the manufacturer to use a high impact, heat stable material which has a low dosage rate, therefore becoming a low cost delivery system.

Essential oils are the natural flavour source and are perfect for most applications with no water or solvent addition to interfere with the manufacturing process or limit shelf life.

As our oils are processed through low temperature distillation and rectification under a gentle vacuum, we are able to create a blend which is unique to each client and whose flavour profile will be as nature intended.

We have spent the past 75 years developing our expertise, constantly updating our processing and manufacturing techniques and using a extensive palette of globally sourced top quality materials to provide you with a unique and exceptional service. Allow our experienced flavour chemists and experts in finished product manufacturing to work in partnership with you; developing dynamic, innovative ideas and concepts that you may never have realised were possible.

We regularly work on projects in the following categories:

<b>Confectionery</b>	Chewing Gum (sugar and sugar free), High Boils (hard candy) Lozenges, Chews, Gums and Jellies, Panned and Sugar Free products, Fudge and Caramel
<b>Chocolate</b>	Tablet, Fondants and Pralines
<b>Dairy</b>	Ice Cream, Yoghurt, Cheese cakes and Frozen Desserts
<b>Bakery</b>	Biscuits and Cakes
<b>Oral Care</b>	Toothpaste, Mouthwash and Chewing Gum
<b>Soft Drinks</b>	Carbonated or still





With Citrus products in general, the juice and oil are extracted in one process at origin utilising FMC extractors. In other methods of recovering oil, the citrus fruit conveyed over needle rollers before the extraction process and the oil which appears is washed away with water (BROWN), or the outer section of peel (flavedo) is rasped before being mixed with water and then further processed (INDELICATO). The oil-water emulsion contains approximately 70 to 90% of the essential oil naturally present in the peel. This “wash water” contains between 2 and 5 kg of oil as emulsion per 100 kg of raw material processed depending on the fruit and technology used.

The proportion of oil in the wash water is usually between 0.5 and 2.0% (vol.). In the concentration stage (first stage) this oil is generally concentrated up to 70 to 85% (vol.). At the same time, relatively coarse solids fractions are separated off. The total volume of oil contained in the peel wash water can be efficiently recovered as clear essential oil with a centrifuge. F.D. Copeland offers an extensive range of products either single or folded from all major origins, all cold pressed with the exception of distilled Lime.

### Commonly Available Origins

#### **Lemon**

Sicily  
South Africa  
Spain  
Argentina  
California  
Turkey  
Brazil  
Uruguay  
and Israel

#### **Lemon**

Peru  
Cuba  
Haiti  
West Indies and  
South Africa

#### **Orange**

Florida  
Brazil  
Spain  
Sicily  
Italy  
and Belize

#### **Tangerine**

Florida  
South Africa  
and Brazil

#### **Mandarin**

Sicily  
and Brazil

#### **Grapefruit**

Florida  
W Indies  
Israel  
California  
Belize  
and South Africa

#### **Bitter Orange**

Brazil  
and South Africa  
Spain  
and Dominica



# Mentha Arvensis



Arvensis Mint oils are predominately sourced from India and China. The oil can be described as having an earthy, strong, mentholic flavour profile. The oil has a higher yield than Piperita, often producing between 50-70 kilos of the oil per acre harvested.

The steam distilled extract yields a product containing approximately 75% natural menthol. The menthol in turn, is removed by freezing to be sold as crystal leaving the de-mentholised oil with 45% menthol content. The crop is cut in June with potential for a second cutting again in August if weather conditions continue to be favourable after the first harvest.

India is the main producer with the bulk of the harvest being produced east of Delhi extending out to Lucknow. China, once the largest producer of Arvensis is now a net importer of mint products and yet still produces good quality oil.



Peppermint is the largest of all essential oils. The plant was taken to the USA from England in the early 19th century and helped to form the foundation of the largest Peppermint industry in the world. The principle qualities are: Willamette, Madras, Yakima, Idaho and Mid West. Other lesser quality Piperita oils can be found in India, England, Italy and China.

In the USA the plants are harvested when fully mature (after 2 years) during early full bloom (July / August) to control the menthofuran percentage to as lower level as possible, preventing harsher or more bitter flavour characters coming out in the oil. September's second cutting has a lower yield per acre. The oil is distilled from the dried herb with further rectification (as done by F.D. Copeland) carried out to produce a cleaner, more balanced product. Single origin oils can then be blended further to create a certain character or consistent quality as demanded by our clients. Piperita menthol levels are much lower than that of Arvensis mint and they are famous for being malty, creamy, soft and herb like.







*Mentha Spicata* (Native Spearmint) and *Mentha Cardiaca* (Scotch Spearmint) are two types of Spearmint sourced from the Mid and Far West USA with further qualities available from India and China.

*Mentha Viridis* is sourced mainly from China and India, is a species originally found in Europe and North America.

All species are used widely as an alternative to Peppermint for their softer and more herbal character in Chewing Gum, Panned Confectionery and Oral Care products. It is also used to blend with Peppermint and Menthol to create unique flavour blends which are more difficult to mimic by those manufacturers competing in the global market for position.

The fresh flowering herb when steam distilled on the farm yields 0.25% to 0.5% of volatile oil. The main constituent of this oil is natural Carvone.



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## Product List

Anethol  
Aniseed Oil  
Almond Oil Sweet  
Amyris Oil (W.I.Sandalwood)  
Angelica Root Oil  
Armoise Oil  
Bay Oil  
Basil Oils  
Benzoin Resinoid  
Bergamot Oils  
Buchu Oil  
Cajuput Oil  
Camphor Oil - White  
Cananga Oil  
Caraway Oil  
Cardamon Oil - Guatemala  
Carrot Seed Oil  
Cassia Oil  
Cedarleaf Oil (Thuja)  
Cedarwood Oil - Virginian  
Cedar Atlas Oil  
Chamomile Oils  
Cinnamon Bark Oil  
Cinnamon Leaf Oil

Cistus Oil  
Citronella Oils  
Clary Sage Oil  
Citral  
Clove Leaf Oil - Cleaned  
Clove Stem Oil  
Clove Bud Oil  
Cognac Oil - White  
Coriander Oil  
Cubeb Oil  
Cumin Seed Oil  
Cypress Oil  
Davana Oil  
Dill Seed Oil  
Elemi Oil  
Eucalyptus Oil - Globulus  
Eucalyptus Oil - Citriadora  
Eucalyptus Oil - Rectified  
Eugenol  
Evening Primrose Oil  
Fennel Oil - Sweet  
Frankincense Oil (Olibanum)  
Galbanum Oil  
Geranium Oils

Ginger Oil  
Ginger - Oleoresin  
Grapefruit Oils  
Immortelle Absolute  
Iris Absolute - Concrete  
Jasmin Absolute  
Juniperberry Oil  
Laurel Oil  
Labdanum  
Lavender Oils  
Lavandin Oils  
Lavender Spike Oil  
Lemongrass Oil  
Lemon Oils  
Lemon Oil - Distilled  
Lemon Oil - Washed  
Lemon Terpenes  
Lemon Oils - Folded  
Lemon Oil - Terpeneless  
Lime Oils  
Lime Oil - Washed  
Lime Terpenes  
Lime Oil - Cold Pressed  
Litsea Cubeba Oil

## Product List (cont'd)



F D COPELAND  
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Lovage Root Oil  
Maltol/Ethyl Maltol  
Methyl Salicylate  
Mandarin Oils  
Mandarin Oil - Distilled  
Mandarin Oil - Folded  
Marjoram Oil  
Myrrh Oil  
Myrtle Oil  
Neroli Oil  
Nutmeg Oil  
Oakmoss Absolute  
Origanum Oil  
Orange Oils  
Orange Terpenes  
Orange Oil - Bitter  
Orange Oil- Folded  
Orange Essence Oil  
Orange Essence Oil - Folded  
Palmarosa Oil  
Parsley Seed Oil  
Patchouli Oil - Light Colour  
Petitgrain Oil  
Pepper Oil - Black

Pimento berry Oil  
Pimento Leaf Oil  
Pine Oil - Sylvestris  
Peppermint Piperita  
- American  
- Indian  
- Australian  
Mint Oil Arvensis  
- Chinese  
- Indian  
- South American  
Peppermint - Rectified  
Menthol Crystals  
Menthone  
Menthyl Acetate  
Rose Oil  
Rosemary Oils  
Sage Oil - Dalmatian  
Sage Oil - Spanish  
Sandalwood Oil  
Spice - Oleoresins  
Styrax Oil  
Spearment Oil - American  
Spearment Oil - Chinese


Spearment Oil - Indian  
Spearment Oils - Rectified  
Tangerine Oils  
Tagettes Oil  
Tarragon Oil (Estragon)  
Thyme Oils  
Tuberose Absolute  
Vanilla Beans - Madagascan  
Vanillin  
Verbena Oil  
Valerian Root Oil  
Vetyver Oil  
Wintergreen Oil  
Ylang Ylang Oil



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