

## **YLANG YLANG OIL – The essential oil of the flowers of *Cananga odorata***

Ylang ylang oil is distilled from the freshly harvested flowers of the tree *Cananga odorata*. The oil is an important component in fragrances. Supply is dominated by the Indian Ocean islands of Comores, Madagascar and Mayotte.

Ylang ylang oil is an essential ingredient in high-end ('haute gamme') perfumery. It cannot be replaced. It imparts floral top notes that lift the composition, and is widely used in both floral and oriental compositions. It is an important ingredient in many long established perfumes, and an important component in the perfumer's palette for new creations. Market demand for ylang ylang oil from the perfumery sector is strong and continuing.

Comoros is the dominant global source for ylang ylang oil. Of an annual global production generally estimated at around 100 tonnes, Comoros produces 50-65 tonnes, Mayotte 10-20 tonnes, and Madagascar 20-25 tonnes. Historically Comoros was recognized as the premier high quality source, producing oil in the 5 classic fractions (ES, E, P, D, T<sup>1</sup>) based on density (whereas Madagascar only produces 3 grades). The grades are defined by density, but each grade has a particular aroma profile and intensity of odour, the higher grade (ES, E) having the strongest and finest odours and being the most valued by perfumers for use in high end perfumes. In recent years, however, there have been 2 important and adverse trends in the industry in Comoros: a decline in total production to less than 40 tonnes, and a drastic decline in quality from: (i) reducing the number of grades from 5 to 2: current production is simply of a 'high quality' oil, HQ (effectively comprising E, P and possibly D fractions) and a 'low quality' oil, BQ<sup>2</sup> (comprising T and possibly some D fractions); and (ii) widespread fraudulent manipulation of oils, both by direct adulteration with other fluids (to increase both volume and density), and by long storage/heating (storage/heating leads to a natural increase in density, so raising the apparent grade as measured by density, but without any corresponding change/improvement in the odour profile that should be linked with a higher density fraction). Prices have risen substantially throughout the value chain over recent years (over the past 10 years prices for flowers have risen from FC 75-150/kg to FC 250-350/kg; prices for oil at the distiller have risen from FC 375/degree/kg to FC 1,000/degree/kg) but this has not delivered the improvement in the industry wanted by the market.

### **Production, Imports & Exports**

Annual global production is generally estimated at around 100 tonnes. Comoros produces 50-65 tonnes, Mayotte 10-20 tonnes, and Madagascar 20-25 tonnes. There are no other production origins of any scale. Indonesia produces small quantities of closely related cananga oil (a different sub-species of tree is cultivated) which can be

---

<sup>1</sup> ES Extra Superieur; E Extra; P Première; D deuxième; T troisième;

<sup>2</sup> BQ: basse qualité

used as a substitute for the Troisième grade of ylang ylang – it does not separate the oil into different fractions, only the complete oil is sold.

Imports from all origins are dominated almost exclusively by France.

Reliable export data for ylang ylang oil for recent years are not available from Comoros. The major world trade databases (Comtrade, Eurostats etc) classify ylang ylang oil under the Harmonised codes 33012911 and 33012931<sup>3</sup> that combine ylang ylang with niaouli and clove oils. Comoros and Mayotte do not produce any significant quantities of niaouli and clove oil so trade data for these codes from these origins can be taken as ylang ylang oil. The US trade database uses code 3301295143 for ylang ylang and cananga oils only, and data shows that imports of these products are almost exclusively from France with negligible quantities imported direct from Comoros.

Import data for the European Union (EU27) grouping, and France, from Comoros and Mayotte (combined) is given in the Table below, and shows clearly that almost all imports into the EU are made by France. Equivalent US import data (for ylang ylang and cananga oil only) shows almost all supply to the US is from France with only very small quantities imported direct from origin (Comoros, Madagascar), although direct imports from Madagascar have increased significantly over the last 2 years.

#### **Ylang ylang oil imports to EU27 & France, from Comoros & Mayotte, 2005-2012, tonnes**

	2005	2006	2007	2008	2009	2010	2011	2012
EU 27	50.1	64.2	53.8	54.8	40.2	55.7	39.4	32.4
Comoros & Mayotte	50.1	64.2	53.8	54.8	39.8	54.9	39.3	31.9

Source: Eurostats

#### **US Imports of ylang ylang & cananga oil, by major origin, 2005-2012, tonnes**

	2005	2006	2007	2008	2009	2010	2011	2012
France	22.8	30.7	29.2	28.8	20.5	27.7	12.7	12.0
Madagascar	0.8	0.3	0.8	1.2	0.7	1.1	7.3	7.2
Comoros	0.0	0.1	0.8	0.4	0.1	0.3	0.0	0.1
Indonesia	1.5	1.8	3.2	1.0	1.5	1.9	1.2	1.0
Other <sup>4</sup>	5.4	13.4	3.0	2.4	2.0	3.0	2.4	1.0
Total	30.5	46.3	37.0	33.8	24.8	34.0	23.6	21.3

Source: US FAS

<sup>3</sup> 33012911: terpenic oils of ylang ylang, niaouli & clove; 33012931: terpeneless oils of ylang ylang, niaouli & clove. Almost all oil is exported as the unmodified terpenic oils. Data given is for the 2 codes combined.

<sup>4</sup> Primarily re-exports from other European countries

Imports (tonnes) to France of ylang ylang oil from the Comoros and Mayotte over the period 2005 to 2012 are given in the Table below. Exports from Comoros show a sharp decline over the last 2 years from the traditional level of 50 to 65 tonnes into the range 30 to 40 tonnes. This shortfall has not been made up by production from other origins, and the market is significantly under-supplied.

### **Imports of ylang ylang oil to France from Comoros and Mayotte, 2005-2012, tonnes**

	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Comoros	50	64	54	55	40	55	40	32
Mayotte	0	0	8	8	4	4	1	1

Source: Comtrade Trade Map

### **World import demand**

World import demand of ylang ylang oil remains around 100 tonnes/yr. There is a fixed demand for this oil in high-end perfumery that cannot be replaced by synthetics or other substitutes. The global fragrance market continues to show strong growth at the high end, with rapid growth in the emerging economies of SE Asia, China and South America adding to stable performance in the core established western markets and this implies a growing demand for ylang ylang oil, rather than a static or declining market.

### **Market prices and trends**

Ylang ylang oil is priced by grade on the basis of density – on the assumption that the density is a true reflection of the odour, and therefore value to the perfumer, of the oil. However, with the development of fraudulent manipulation of the oil in the Comoros, increasing the density without commensurate change in the odour, pricing is subject to chemical and olfactory analysis of the oil exported.

Import prices can be calculated from import trade data. Prices for all grades are combined. As France imports almost all the oil produced from the Comoros, the price data gives a fair reflection for the average of total Comorien production. Import price data is also given for Madagascan imports of ylang ylang into the US market, as fraudulent adulteration of the oil is not a significant problem in this origin.

Import prices of ylang ylang oil to France have varied over the range US\$72 to US\$156/kg over the period 2005-2012. Prices have increased significantly over the past 3 years from a low of US\$88 in 2010 to around US\$108 in 2012. Import prices for Madagascan ylang ylang oil into the US market are consistently higher (with the exception of 2005) than the import price for Comorien oil in France, varying in the range US\$96 to US\$225/kg over the period 2006-2012. Prices in 2012 were US\$149/kg. US import prices for Madagascan oil are typically at a 30 to 40% premium to French imports of Comorien oil, sometimes up to 80% higher. Whilst it cannot be confirmed that the US is importing a balanced range to qualities reflecting overall production of the oil in Madagascar (rather than just some selected higher quality

higher priced grades), the typical US import price premium of around 30-40% is seen as a more accurate reflection of the price for good quality unadulterated oil.

**US and France: import prices for ylang ylang oil, 2005-2012, \$/kg**

	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
France (ex-Comoros)	72.4	73.1	125.1	156.6	117.4	88.0	102.4	107.6
US (ex-Madagascar)	62.2	96.2	225.1	213.7	141.1	144.1	177.0	148.8

Source: Comtrade Trade Map and US FAS

Prices spiked over the period 2007/2008, but if this period is excluded, prices show reasonable stability with a general upward trend – reflecting the strong stable demand for the product in the market.