



Review on Extraction and Production of Orange Oil in Aroma Therapy

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Abstract:

Cosmetics are incredible in demand since historical time till day. Sweet orange (*Citrus sinensis* L.) is the most commonly grown tree fruit in Maharashtra.

Orange peel is considered as a waste but can be used for the extraction of essential oil which has many applications ranging from food flavouring agent, insect repellent to cosmetics. In the present study an attempt was made to extract the oil from oranges, by steam distillation. In order to study the compositions of the oil extracted constituents were analyzed by GC-MS method. In all 15 compounds were detected of which D- limonene was found as a dominant contributor

Objectives:

1. To study the knowledge about Orange Oil preparation.
2. To understand the production of Orange Oil.
3. To study the different Manufacturing process of Orange Oil.
4. To Understand the advantages of Orange Oil.
5. To study about different equipment used for preparation of Orange Oil.

Content:

● **Cosmetic:**

In 21st century, the winds of changes in the society are blowing forcefully in all parts of world for application of cosmetic. Cosmetic word is originated from Greek word "Kosmetikos" means adorn and preparation, which is used for this purpose, is known as cosmetic. "Cosmetic are external preparation meant for to apply on external part of the Body. "A cosmetic is an item intended to be rubbed, poured, or sprayed on, introduced in to or otherwise applied to the human Body or any part thereof for cleansing, beautifying, promoting attractiveness Or altering the appearance".

Reference :- Swarnalatasaraf (Reader), Shailendrasaraf (professor & dind Cosmetics A practical manual :1

● **Cosmetic industry:**

The cosmetic industry describes the industry that manufactures and distributes cosmetic products. These include colour cosmetics, like foundation and mascara, skincare such as moisturisers and cleansers, haircare such as shampoos, conditioners and hair colours, and toiletries such as bubble bath and soap. The manufacturing industry is dominated by a small number of multinational corporations that originated in the early 20th century, but the distribution and sale of cosmetics is spread among a wide range of different businesses.

The largest cosmetic companies are Johnson & Johnson, L'Oreal, Gillette, Nivea and Chanel[citation needed] The market volume of the cosmetics industry in Europe and the United States is about EUR €70b per year, according to a 2005 publication.[1] The worldwide cosmetics and perfume industry currently generates an estimated annual turnover of US\$170 billion (according to Eurostat – May 2007). Europe is the leading market, representing approximately €63 billion.

❖ **Reference :-** <https://www.grandviewresearch.com/industry-analysis/essential-oils-market>.

The global essential oils market size was valued at USD 18.6 billion in 2020 and is expected to expand at a compound annual growth rate (CAGR) of 7.4% in terms of revenue from 2021 to 2028.

The increasing popularity of aromatherapy as an alternative for therapeutics and pharmaceuticals is expected to drive market growth in Europe. European countries, including Germany, the U.K., Belgium, the Netherlands, and Ireland are the major markets for essential oils. In Asia Pacific, the market is anticipated to witness a CAGR of 13.8% over the forecast period.

❖ **Reference :-** <https://www.grandviewresearch.com/industry-analysis/aromatherapy-market>

● **Drug and Cosmetics Act 1940 and 1945:**

The Drugs and Cosmetics Act, 1940 is an act of the Parliament of India which regulates the import, manufacture and distribution of drugs in India.[1] The primary objective of the act is to ensure that the drugs and cosmetics sold in India are safe, effective and conform to state quality standards. The related Drugs and Cosmetics Rules, 1945 contains provisions for classification of drugs under given schedules and there are guidelines for the storage, sale, display and prescription of each schedule.

● **Cosmetics prohibited from import Cosmetics :**

From such date as may be fixed by the Central Government by notification in the Official Gazette in this behalf, no person shall import—

- a) any cosmetic which is not of standard quality.
- b) any misbranded or spurious cosmetics.
- c) Any drug cosmetic for the import of which a licence is prescribed, otherwise than under, in accordance with, such licence;
- d) Any cosmetic containing any ingredient which may render it unsafe or harmful for use under the directions indicated or recommended. any cosmetic the import of which is prohibited by rule.

● **Prohibited from manufacture, store and sale in India:**

As per the directions of the Drugs and Cosmetics Act the following drug are prohibited from being manufactured for sale, distribution, exhibition or from being offered for sale .

- Drug and Cosmetics of sub - standard quality
- Misbrand cosmetics.
- Adulterated cosmetics.
- Spurious cosmetics.
- Patent or proprietary medicine.
- Cosmetic that consists of any ingredients which may render it unsafe or harmful or use.
- Trading of any cosmetic by not complying by not complying with the provision of this Act.

● **Offence and Penalty**

Sr. No	Offence	Penalty	
		First conviction	Subsequent conviction
1.	Import of adulterated or spurious cosmetic or any cosmetics containing any ingredient which may render it unsafe or harmful for use under the directions recommended	Imprisonment upto three years & fine up to Rs. 5000	Imprisonment upto five years or fine upto Rs. 10,000 b
2.	Import of any drugs or cosmetics other than, the import of which is or both prohibited	Imprisonment up to referred 6 months or fine upto Rs 500 above	Imprisonment upto 1 year or fine upto Rs. 1000 or both
3.	Impart of any cosmetic in contraction of any notification passed under section 10 A	Imprisonment upto 3 years or fine uptoRs. 500 or both	

Note :- Penalties under 1,2 or 3 above are in addition to any penalty awarded under the provisions of sea cosmetic Act.

Sr. No	Offence	Penalty
1.	Manufacture for sale, distribution, etc. a. Spurious cosmetic b. Any other cosmetic in contravention of this chapter under Penalties	I imprisonment up to 3 years & fine Imprisonment upto 1 year or fine. Upto Rs. 1000 or both.
2.	Non disclosure of name of a manufacturer or place where manufactured cosmetics are kept	Imprisonment: upto 1 ceptoRs. 1000 year or fine or both

2. Conditions for obtaining license for import manufacture and sale cosmeceuticals :

An import license is subjected to the following conditions:

1. The manufacturer at all times should observe the duty given by him or on his behalf in Form 9.
2. The licensee should allow any authorised Inspector to enter the premises having stocked imported substances for inspection, and also withdraw samples for testing the substances.
3. The licensee should provide the Licensing Authority with adequate sample (either from all batches or from a particular batch as demanded by the Licensing Authority) for examination along with full protocol of the tests which have been applied.
4. The licensee should not sell or offer for sale any batch in respect of which a sample or protocols are furnished as above (3) till a certificate is issued by or on behalf of the Licensing Authority.
5. The licensee should allow any authorised Inspector to inspect such records.

Advantages of orange oil :-

- lift your mood or reduce stress.
- treat skin conditions such as acne.
- reduce pain or inflammation.
- relieve stomach upset.
- **Side effects of Orange Oil :-**
 - Skin inflammation and irritation .
 - Nasal and throat irritation or mild burns.
 - Pregnant women and children
 - Mild side effects include skin irritation and inflammation if applied undiluted.

Outcomes:

1. Understood the knowledge about Orange Oil preparation.
2. Studies the different Manufacturing process used in Orange Oil.
3. Understood the knowledge about different methods of preparation of Orange Oil.
4. Understood the advantages of Orange Oil.

Conclusion:

Citrus fruits are the widely available and maximum consumed fruits. It has so many medicinal properties and very less toxic effect. In the present study essential oil was extracted by steam distillation method, it is the cheapest and easiest method. Many of the volatile chemicals are detected, which were naturally derived from fruit peel of Citrus sinensis. Were 15 compounds are identified by GCMS analysis of the oil of orange peel. The detected compounds may be helpful in the study and association of various medicinal properties in the extract of fruit rind. In extracted oil 65% of limonene was detected. It is the major component of the orange peel oil and probably the antibacterial and antifungal property of the oils.