Plant Aromatics and Perfumery

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit Distribution Of The Course			Eligibility Criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Plant Aromatics and Perfumery	**2**	**0**	0	**2**	Class XII	NIL

Learning objectives

- Provide the basic understanding of aromatic and medicinal plants including classification and methods of extracting essential oils.
- Practical demonstration of extraction and quality assessment of the product obtained.

Learning Outcomes

After completion of the course, learners will be able to:

- extract essential oils from a variety of plants and plant parts.
- develop strategy for promotion and marketing of the aromatic and essential oils.
- establish their own startup, become self-reliant and/or adapt to job roles in beauty and wellness sector.

Syllabus

Practicals: 60 hours

1. Classification of essential oils on the basis of chemical composition, aroma and extraction methods. 4 hours
2. Principles, processing and techniques of extraction of essential oils. 4 hours
3. Cultivation practices of the common aromatic crops (any five) - Rose, Lavender, Peppermint, Spearmint, Basil, Citronella, Vetiver, Palmrosa, Lemongrass. 8 hours

4. Extraction process of essential oil from fruit/ fruit peel by steam distillation (e.g. orange, lemon). 4 hours
5. Extraction of essential oil from bark by steam distillation (e.g. cinnamon). 4 hours
6. Extraction of essential oils from flower by steam distillation (e.g. clove, rose, jasmine, lavender, rosemary). 4 hours
7. Extraction of essential oil from leaves and stems by steam distillation (e.g. lemongrass, eucalyptus, citronella, bottlebrush). 4 hours
8. Extraction of essential oil from seeds by steam distillation (e.g. fennel, nutmeg). 4 hours
9. Extraction of essential oil from root (e.g. vetiver) and rhizome (e.g. ginger, curcuma) by steam distillation 4 hours
10. Determination of oil content in aromatic crop/material by Clevenger's method. 4 hours
11. Quality assessment of essential oils through s*ensory evaluation* (odour, colour), physical tests (specific gravity, refractive index, optical rotation, solubility), chemical tests (determination of acid value, ester value). 8 hours
12. Demonstration/Illustration of Instruments and techniques quality assessment of Gas chromatography (GC) and Thin layer chromatography (TLC). 4 hours
13. Field Visit to essential oils and perfumery Institute/Industry. 4 hours

Essential Readings:

1. EIRI BOARD. (2008). Handbook of Essential Oils Manufacturing and Aromatic Plants5/E edition, Engineers India Research Institute (India), New Delhi.
2. Kochhar, S.L. (2016). Economic Botany – A Comprehensive Study, 5th Edition. New Delhi, India: Cambridge University Press.

Suggestive Readings:

1. Başer, K.H.C., Buchbauer, G. (2020). Handbook of Essential Oils: Science, Technology, and Applications, 3rd edition, CRC Press.

Examination scheme and mode:

Evaluation scheme and mode will be as per the guidelines notified by the University of Delhi