

ANNEXURE 'B'

IFTM UNIVERSITY

Faculty of Pharmacy

(School of Pharmaceutical Sciences/Pharmacy Academy)

**Course: Cultivation of Aromatic Crops, Processing and Quality
Assessment of Essential Oils
Course Code: PHVAC02**



Aromatic plants can be found in abundance in the natural world. Only around a fifth of the 1500 species of Aromatic plants discovered in the universe has been investigated. Aromatic plants are a type of plant that is used for their aroma and flavour. They are also used for healthcare because they have a lot of medicinal characteristics. Aromatic oils are claimed to be found in plants' roots, bark, wood, leaves, flowers, seeds and fruits. Medicinal and aromatic plants are solely botanical raw materials, sometimes known as herbal medications. Aromatic plants are largely employed in cosmetics, pharmaceutical items, health foods and other natural health products for therapeutic, aromatic, culinary purposes and have large commercial values.

The following course has been designed to provide essential knowledge for the cultivation, processing and quality evaluation of aromatic oils. This course will be beneficial for entrepreneurs, farmers, students of pharmacy and agriculture.

Course Objectives

Upon completion of this course, the student should be able to:

1. Understand the world scenario of aromatic crops.
2. Choose the aromatic plant of his/her interest according to the climate zone.
3. Understand the cultivation practices of important aromatic plants.
4. Describe the post-harvesting and storage techniques.
5. Concepts of extraction/distillation and value addition of essential oils.
6. Understand the fundamentals of quality assessment of essential oils.

The training will be done using lectures and PowerPoint slides and videos.

Dr. Amrita Mishra

[Course Co-ordinator]

Course Structure

Course Schedule: Cultivation of Aromatic Crops, Processing and Quality Assessment of Essential oils

S.NO.	OBJECTIVES	COURSE CONTENT	HOURS
1.	Introducing India & World Scenario of Essential Oils	<ul style="list-style-type: none">• Introduction to aromatic crops and volatile oils.• Understanding the commercial importance and utilization of aromatic crops and volatile oils.• Current World Scenario of essential Oils.• Aromatic plants in the Indian subcontinent.• Prospects of cultivation of aromatic crops.	6
2.	Cultivation practices for important aromatic crops-I	Field preparation, Planting, Weed control, Irrigation, and other cultivation practices for Peppermint, Spearmint, Geranium, Patchouli, Lemongrass, Vetiver (Khus)	6
3.	Cultivation practices for important aromatic crops-II	Field preparation, Planting, Weed control, Irrigation, and other cultivation practices for Citronella, Palmarosa, Rose, (Bela) Jasmine, Basil sambac, Lavender	6
4.	Understand post harvesting, storage and extraction techniques	<ul style="list-style-type: none">• Post harvesting techniques to reduce loss of volatile oil• Storage requirements.• Distillation and other extraction techniques of aromatic crops	6
5.	Learn quality assessment of volatile oils	<ul style="list-style-type: none">• Determination of oil content in aroma bearing crop/material by Clevenger's method.• Sensory evaluation of volatile oils.• Physical tests for volatile oils.• Chemical tests for volatile oils.• Thin-layer chromatography for volatile oils.	6