

SKILL DEVELOPMENT WORKSHOP ON PRIMARY PROCESSING & VALUE ADDITION TECHNOLOGIES AND QUALITY CONTROL OF MEDICINAL AND AROMATIC PLANTS

With the increasing demand of natural essential oils, aroma products and herbal extracts from medicinal and aromatic plants, the ability of the farmer/ entrepreneur to process the plants for value addition and for making high quality products has opened the possibility of increased income generation and better quality of life. Post harvest management of the crops, designs, technical knowhow, construction of equipments, choice of the distillation techniques and processing parameters during the primary and value addition stages all play a vital role in influencing the purity, quality and economics of the end products which opens of the scope for new entrepreneurs

- Title of the Course : Skill Development workshop on Primary Processing & value addition technologies and quality control of Medicinal and Aromatic Plants
- Duration : 3 weeks (21 days)
- No. of Seats : 20
- Educational qualifications : 12th pass
- Age Group : 18-35 years
- Date of commencement : 06 – 26 February 2018
- Venue of the course : Chemical Engg Department, CSIR-CIMAP, Lucknow
- Course fees : Rs 20,000
- Residential / Non residential : Non Residential

Training for whom: The program targets to provide training to the youth for development of entrepreneurial skills in area of essential oil processing and value addition. This course will be specially designed to impart a step by step knowledge on the technologies for aromatic plants and familiarize the participants with the technical and practical aspects of the cultivation, primary processing and value addition of essential oils.

Management and faculty: The faculty for the course is drawn from the vast expertise of CSIR-CIMAP scientists & technical staff working in the different areas of agrotechnology, plant breeding, chemical engineering, chemistry, quality control and business development groups. CSIR-CIMAP has a state of art distillation units, pilot plant for value addition and quality control labs wherein the trainees shall have hands on training on all aspects of essential oil processing

Selection Procedure: Depending on number of applicants, the selection will be made on basis of background of candidate and his interest in the field and general aptitude which shall be judged by correspondence / interviews.

Methods of Instruction: This training course will be specially designed to impart a step by step knowledge on the technologies for aromatic plants and familiarize the participants with the technical and practical aspects of the primary processing and value addition of essential oils. Particular emphasis will be laid on the quality analysis procedures for the essential oils as the export market demands only high quality products. Objective of the workshop will be affecting

technology up gradation required for the production of international quality essential oils and aroma molecules for domestic and export market. The method of instruction shall be Hindi / English.

Sponsorship: Established industrial sectors are welcome to sponsor candidates of their interest. In the selection modality special weightage shall be given to industry sponsored candidates.

Salient features of the Training:

Real Time “Hands on” exposure to the complete technologies on

- Constructional & design features of equipments for distillation of essential oils and extraction of medicinal herbs
- Pilot and commercial scale production of essential oils using various different distillation techniques and methods suited to different classes of aromatic herbs (grasses, mints, vetiver, geranium, nagarmotha etc).
- Laboratory and pilot scale extraction and downstream processing of medicinal herbs using different solvents and techniques
- Purification process and downstream rectification methods for crude and poor quality essential oils.
- Fractional distillation of essential oils for isolation of aroma chemicals.
- Techniques and processes for production of concretes and absolutes from flowers.
- Process technology of menthol flakes crystallization.
- Derivatisation of aroma chemicals for value addition.
- Quality analysis techniques & tools for essential oils & aroma chemicals
- Quality analysis of herbal extracts & phytomolecules

Theoretical backup on

- Cultivation / Agro technologies of selected high value MAPs
- Importance of good agricultural and harvesting practices for aromatic plants.
- Principles of distillation, purification and storage of essential oils.
- Important essential oils of India: Chemistry and uses.
- Fundamentals of quality analysis techniques and procedures for essential oils.
- Value addition of essential oils and aroma chemicals for industrial utilization.
- Production to marketing
- Defining Quality Parameters for raw herbal drugs and finished products

Field and Industrial visits: Proposed to (i) Farmers Fields, Local distillation Units (iii) Menthol Production Unit and (iv) FFDC, Kannauj

Oil identification & Sensory evaluation tests

Evaluation of trainees: Evaluation will be done on the basis of the overall participation of the trainees in the theoretical and practical sessions which shall be judged time to time during the course through interactive sessions

Certification: A certificate shall be issued to the successful trainees