Jai Hind College (Autonomous)

in association with

Department of Oils, Oleochemicals and Surfactant Technology Institute of Chemical Technology

Under the aegis of

RUSA

presents

A Faculty Development Program

on

Essential oils- Extraction, Characterization and Application

Date -**16th to 21st January, 2023**

Chief Guest
and
Keynote Speaker

Prof. Dr. R. D. Kulkarni
Senior Professor
Institute of Chemical Technology
Ex-Pro-Vice Chancellor
University of Mumbai

ABOUT THE FDP

This Faculty Development Program cum Workshop is designed to equip the participants with all aspects of Essential oils. Essential oils are important in various fields like medicine, pharmacy, nutrition, perfumery, textile, biofuels. There is a good blend of theory and practicals covering classical as well as advanced technology coupled with industrial visit in this program.

The program gives an excellent opportunity to the participants to interact with experts in industry, research and academia of essential oils

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KEY FEATURES

- **Good blend of theory and practical**
- **Resource persons are experts from the industry and academia**
- **Industry visit for production and analysis**
- **Exposure towards the working and instrumentation of GC, GC-MS, HPTLC, DSC, TLC, etc**

SCHEDULE LINK and QR code

Schedule Link

VENUE

Monday (16/1/23): **Jai Hind College Autonomous**

Tuesday (17/1/23): **Jai Hind College Autonomous**

Wednesday (18/1/23)**: Jai Hind College Autonomous**

Thursday (19/1/23): **Institute of Chemical Technology**

Friday (20/1/23): **Industrial Visit to Bromochem Industries Pvt. Ltd.**

Saturday (21/1/23): **Institute of Chemical Technology**

About Jai Hind College

Jai Hind College, (Autonomous), Mumbai, established in 1948, by a group of erstwhile professors of D.J. Sind College, Karachi, and other eminent educationists under the registered name of 'Sind Educationists' Association' for the educational rehabilitation of the Sindhi community. Starting from a humble two-room college, catering to only the Arts stream, it soon progressed to include Science in 1949, followed by Commerce in 1980. Post 2000, the college started several "Self-financed" and "Vocational" courses to improve employability of students. like Bachelor of Management Studies (BMS), Bachelor of Mass Media (BMM), Bachelor of Accounting and Finance (BAF), Bachelor of Banking and Insurance (BBI), Bachelor of Financial Market (BFM) and, Bachelor of Vocational Studies in Travel & Tourism Management (B. Voc. TT) and Software Development (B. Voc. SD), Bachelor of Business Administration (BBA) in collaboration with TCS , M.Sc. Big data analysis. College is a recipient of DST-FIST, STAR-DBT, RUSA and Best College award(2016). Jai Hind is endowed with varied facilities with a focus to improve the learning environment and outcome; a few notables are: a well-established Placement Cell; a well-equipped library, largely digitalized; an excellent Centre of Research with state-of-the-art instrumentation facility; an AudioVisual Centre and an Auditorium; and an Interactive Learning Centre, a Language Lab as well as a Mentoring cell.

The College has a strong Alumni Association who contribute to the alma mater in diverse forms. One of the notable Alumni contributions is in the form of participation in 'Leadership Series' lectures wherein they share their life experiences which serve as an inspiration to the current young minds. A few notable speakers in this series were Honorable Union Cabinet Minister Shri Piyush Goyal, and renowned scientist Dr. R. A. Mashelkar - Former Director General, CSIR- advisor to president and prime minister.

About ICT

Established on October 1, 1933 as University Department of Chemical Technology (popularly called UDCT) of the University of Bombay (now Mumbai), with the noble intention of advancing India's knowledge reserves in chemical science and technology, the Institute has grown to become a premier (deemed) university devoted to education, training, research and industrial collaboration in chemical engineering, chemical technology, applied chemistry, pharmacy, biotechnology and bio-processing. The then UDCT was granted partial autonomy by the University of Mumbai in 1985, which was taken to the next echelon under the concept of autonomy propagated by the University Grants Commission (UGC). It was converted into University Institute of Chemical Technology (UICT) on 26th January, 2002 and under the TEQIP of the World Bank it was granted full autonomy in 2004.

The autonomous institute status was finally converted in to a Deemed-to-be-University by the Ministry of Human Resource Development (MHRD), Govt. of India, on 12 September 2008. ICT's contribution to wealth creation must be one of the best amongst the branded institutes. The institute has been developing technologies which are consistently being commercialized.

About Department of Oils, Oleochemicals and Surfactant Technology

This Department was started as Division of Oils, Fats and Waxes in 1943 offering a 2-year course B.Sc. (Tech.) [Technology of Oils, Fats and Waxes] after B.Sc. (Chemistry). The duration of this course was increased to 3years from 1965. In 1998, this Division was renamed as Division of Oils, Oleochemicals and Surfactants. The undergraduate course was changed to a 4-year course, namely B. Chem. Tech. [Technology of Oils, Oleochemicals and Surfactants].

The Department has excellent facilities for research and is equipped with advanced instruments such as: Gas Chromatograph GE17A. Gas Chromatograph-4890D, UV-Spectrophotometer, Automatic Tensiometer, Karl Fischer Titrino, HPLC, HPTLC, Spray Dryer LSD-48, Lab Pervaporation Unit, Glycerol Evaporation pilot plant, Toilet Soap Plant, Refining Plant, Filtration Plant, High Pressure Autoclave, Short Path Distillation Unit, Batch Solvent Extraction Plant, Turg-O-Tometer, Rotary Vacuum Evaporator, CEC Biodegradability test, Brookfield Viscometer, Pour Point Apparatus, Shear Stability Testing Unit, Rancimate.

Objectives of the FDP

1. To provide an overview of sources, extraction, characterization and application of essential oils
2. To familiarize the participants with market demand, trends and large scale production of aromatic and flavoring compounds
3. To educate the participants with the fundamentals of oxidation of essential oils, its effect and prevention
4. To brief participants with the eco friendly technologies for manufacturing of aroma chemicals
5. To introduce participants with the concepts of sensory evaluation
6. To brief participants with the theories of conventional and advanced methods for essential oil extraction
7. To demonstrate and provide a hands-on exposure to the participants on the various extraction methods for essential oil and its physico-chemical analysis at lab scale
8. To educate participants to select the correct analytical instrument for characterization of essential oils
9. To demonstrate use of conventional analytical techniques like TLC and it's standardization to characterize essential oils
10. To make participants understand the principles, instrumentation, working, maintenance and standardization of advanced analytical instruments like GC, HPTLC, GC-MS and DSC
11. To provide a hands-on session to participants to use DSC
12. To make participants interpret the results obtained from instrumental output and troubleshooting and use of statistics in validation of results.
13. To provide a one-day industrial visit to the participants wherein the participants would witness the large scale production and characterization of essential oils

Outcomes of the FDP

Participants will be able to

1. Comprehend a general review on essential oils in terms of it's natural existence, market trends, production, applications and expenses
2. Identify sources of essential oils and determine the correct extraction protocol
3. Discuss the green technologies available on lab scale as well as large scale for extraction of essential oils
4. Select the most appropriate conventional as well as advanced analytical techniques for characterization of essential oils
5. Carry out standardization of advanced analytical instruments
6. Perform analysis on GC, GC-MS, HPTLC and DSC
7. Interpret the analytical spectrum
8. Use classical TLC plates for characterization of essential oils
9. Justify the encapsulation of essential oils to preserve it's stability
10. Appreciate large scale production of essential oils, downstream and characterization
11. Use (individually) DSC to characterize essential oils
12. Differentiate between different synthesis routes like natural, chemical and synthetic biology

Resource Persons

Mr. Prasad Jitkar

Marketing and Business Manager (LUZI), Avees Biotech Pvt. Ltd

Dr. Shalini Arya

Institute of Chemical Technology Oils, Oleochemicals and Surfactant Technology Department

Dr. Chandu Madankar

Institute of Chemical Technology Oils, Oleochemicals and Surfactant Technology Department

Mr. Ranjeet Jadhav

Flavourist, Sensient India

Prof. Dr. Jyostna Waghmare

Institute of Chemical Technology, Oils, Oleochemicals and Surfactant Technology Department

Dr. Gunjan Prakash

Institute of Chemical Technology DBT-ICT Centre for Energy Biosciences

Dr. Sushilkumar Dubal

Technical Director
Bromochem Industries Pvt. Ltd.

Mr. Abhay Mahajan

IFF
Technical Manager

Dr. Rajesh Vadgama

Scientist - F (R&D)
Privi Organics Pvt. Ltd.

Registration details

Limited seat (40 only), first come first serve

Who can Register?

Post Graduate students, Research Scholars, Faculty

Registration charges-

Rs. 3500*/- (Three thousand Five hundred only)

Last date of registration

14th January, 2023

Registration and payment link

https://forms.gle/o3NGnnmL9pW6GBsj9

Chief Guest

Prof. Dr. R. D. Kulkarni
Senior Professor
Institute of Chemical Technology
Ex-Pro-Vice Chancellor
University of Mumbai

Our Patron
Dr. Ashok Wadia
Principal
Jai Hind College (Autonomous)

Program Co-ordinators

Dr. Sangeeta Parab
Vice - Principal (Science)
Jai Hind College (Autonomous)

Prof. Dr. Jyotsna Waghmare
Professor,
Department of Oils, Oleochemicals and Surfactant Technology, ICT, Mumbai

Organizing Team

Dr. Hiral Pandya
Assistant Professor, Department of Biotechnology
Jai Hind College (Autonomous)

Dr. Onkar Lotlikar
Assistant Professor, Department of Chemistry
Jai Hind College (Autonomous)

For any query
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