CSIR Integrated Skill Initiative

Plant authentication, phytochemical extraction, formulation and HPLC analysis of herbal products

CSIR-CDRI

CSIR-CDRI is a unique R & D Institution in the country with state of the art infrastructure for new drug discovery and development from "Concept to Commercialization". It is poised to become a global leader through cutting edge science & technology. For New India, the Institute is re-orienting itself into a multidisciplinary nodal center for development of drug for the unmet medical needs as well as the expectation of the industry. While focusing on the discovery & development of drugs, the institute is aligned & contributing towards the national missions programs such as Make in India, Swatch Bharat, Skill India, Digital India, Start-up India, Accessible India and Sashakt Bharat.

Plant based drug discovery and development is multi-layered process involving expertise in raw material authentication, its chemical processing followed by addressing its regulatory requirements. CSIR-CDRI caters to these different expertises under one roof. CSIR-CDRI has designed a compact skill development program, which offers hands-on training at various aspects of plant based drug/product developments. This program will cover the authentication of plant and plant material, phytochemical extraction procedure, herbal formulation, regulatory considerations in phytochemicals and finally quality control of extract using HPLC tool to generate skilled human resources suitable for employment in the natural product based industries/ analytical chemistry/ nutraceuticals/ herbal industry/research industry/laboratory and academia.

CSIR-CDRI invites applications for the course as per the details given below:

Title of the Course	**: Plant authentication, phytochemical extraction, formulation and HPLC analysis of herbal products**
Duration	**: 04 Weeks (29th March to 23rd April 2027)**
No. of Seats	**15**
Educational Qualification	**: M.Sc. (Chemistry/ Life Sciences/ Biotechnology/ Bioinformatics), B.Pharm./ M.Pharm. (Pharmaceutical Chemistry/Medicinal Chemistry), B.E./ B.Tech/BAMS Degree completed/perusing with basic knowledge of computer**
Venue of the course	**: CSIR-CDRI, Lucknow**
Course Fee	**: Rs. 10,000/-**
Last Date for submission of applications	**: 22.02.2027**
Course Coordinator	**: Dr. Vineeta Tripathi (E-mail: vineeta.tripathi.cdri@csir.res.in)**

TRAINING CURRICULUM

The course consists of theoretical and hands on experience on following

- Plant identification and authentication with hands on exposure.
- Pharmacognosy of crude drug/plant material
- Preparation of plant material for extraction.
- Extraction process and techniques.
- Natural product fractionation and purification.
- Formulation development.
- HPLC based method development and validation.
- HPLC analysis for quality control of natural product extracts.
- Regulatory requirements for herbal product registration.

TRAINING FOR WHOM

The course work will be beneficial for persons having background in chemistry, botany, pharmacognosy, medicinal plant cultivation etc. to understand the techniques for development of herbal products including plant authentication, extraction techniques, formulation development, HPLC analysis and regulatory requirements.

SALIENT FEATURES OF THE TRAINING

- Lectures and tutorials for better understanding of the subjects
- Batch wise practical training
- Interactive session & workshops
- Exposure to diverse sample preparation techniques
- Demonstrations of working of state-of-the-art equipment
- Planning experiments for obtaining meaningful results
- Troubleshooting

EVALUATION OF TRAINEES

Evaluation will consist of the following components

- Theory Courses (50 Marks)
- Practical Courses (50 Marks)

CERTIFICATION

The certificate will be issued to the successful candidates for the course

IMPORTANT DATES

Receiving of application by E-mail (last date): 22.02.2027
Intimation to selected candidates: 23.02.2027

Kindly send Application by E-mail only (sdp@cdri.res.in)

Contact:
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