

Final Report on

One Day Workshop and Live Demonstration, Hands-on-skill Training Program on “Application of High Performance Thin Layer Chromatography (HPTLC) in R&D”

Date and Venue

The workshop was organised on 31st October, 2022 at the premises of Girijananda Chowdhury Institute of Pharmaceutical Science (GIPS), Guwahati.

Organizing Committee

Patron: Dr. P. Malairajan, Principal, GIPS- Guwahati.

Event Coordinator: Dr. A. K. Goswami, Assistant Professor, Dept. of Pharmacognosy, GIPS- Guwahati

Co-Coordinator:

- i. Dr. D. Laloo, Associate Professor, Dept. of Pharmacognosy, GIPS- Guwahati
- ii. Dr. B.P. Sahu, Associate Professor, Dept. of Pharmaceutics, GIPS- Guwahati

Members:

- i. Dr. T. Das, HoD & Associate Professor, Dept. of Pharmacognosy, GIPS- Guwahati
- ii. Dr. R. Sengupta, Assistant Professor, Dept. of Pharmacognosy, GIPS- Guwahati

Resource person

Mr. A. Khale, Application Specialist, Anchrom Enterprises (I) Pvt. Ltd., was invited as a resource person for the event. Mr. Khale has developed several new HPTLC methods for academia, pharma, foods, forensic, herbal and speciality organics.

Agenda

- Theoretical aspects in HPTLC- Method development, Quantification and Identification of drug(s) by application of HPTLC.
- Hands on training program for students and the application of HPTLC in R&D.

Participants

The training was attended by students of B.Pharm 7th semester, M. Pharm 1st semester and 3rd semester respectively of GIPS-Guwahati. The training was attended in total by 54 students.

The Training

The training program was inaugurated by Dr. P. Malairajan, Principal, GIPS-Guwahati with a speech. Mr. A. Khale was felicitated by the Principal, GIPS-Guwahati. Next, Mr. Khale provided his valuable insights into the use of HPTLC and its application in different aspects

of quality control, regulatory requirements and production of pharmaceuticals. He showed the application of HPTLC in method development for standardisation of Pharmaceuticals according to the mandate of International Council for Harmonisation (ICH), United States Pharmacopeia (USP). A substantial part of his discussion focussed on the application of HPTLC in identification and quantification of phyto-pharmaceuticals from crude extracts from different plants.

The post lunch session critically evaluated the problems associated with practical handling of HPTLC with hands-on-training of different standard compounds. The students were allowed to have a firsthand feel of the newly installed HPTLC equipment (CAMAG Inc., Switzerland) at the Department of Science & Technology Fund for Improvement of S&T Infrastructure in Universities and Higher Educational Institutions (FIST) laboratory. Mr. Khale critically evaluated the applications of HPTLC by taking the example of caffeine for identification in tea samples. He also discussed the different aspects in trouble shooting of problems associated with HPTLC.

Outcomes of the Training

The participants agreed to the following recommendations:

- HPTLC is a robust technique for use in different aspects related to pharmaceuticals.
- HPTLC is an efficient process in quality control of herbal drugs.
- HPTLC uses very little solvents in comparison to other analytical techniques with the same plate that can be used for identification of multiple samples
- HPTLC is also an effective tool in identification of active compounds in crude drug samples in accordance to World Health Organisation Good Manufacturing Practise.
- HPTLC can be used for routine analysis of drug samples as well as for quality control of pharmaceuticals.

Submitted by:



(Dr. A. K. Goswami)

Asst. Professor

Dept. of Pharmacognosy

Girijananda Chowdhury Institute of Pharmaceutical Science, Guwahati.

Event Coordinator

Workshop on "Application of High Performance Thin Layer Chromatography (HPTLC) in R&D".

Some photographs from the event

