A Report on One Day Industrial Visit To Anchrom Enterprise Pvt. Ltd.

For CAMAG- HPTLC training

Address: A-101, Shree Aniket Apartments, Navghar Rd, Mulund East, Mumbai, Maharashtra 400081.

Date: 20th January 2023

From: Maliba Pharmacy College, Uka Tarsadia University, Gopal Vidhyanagar, Bardoli - Mahuva Road, Tarsadi, Surat, Gujarat – 394350.

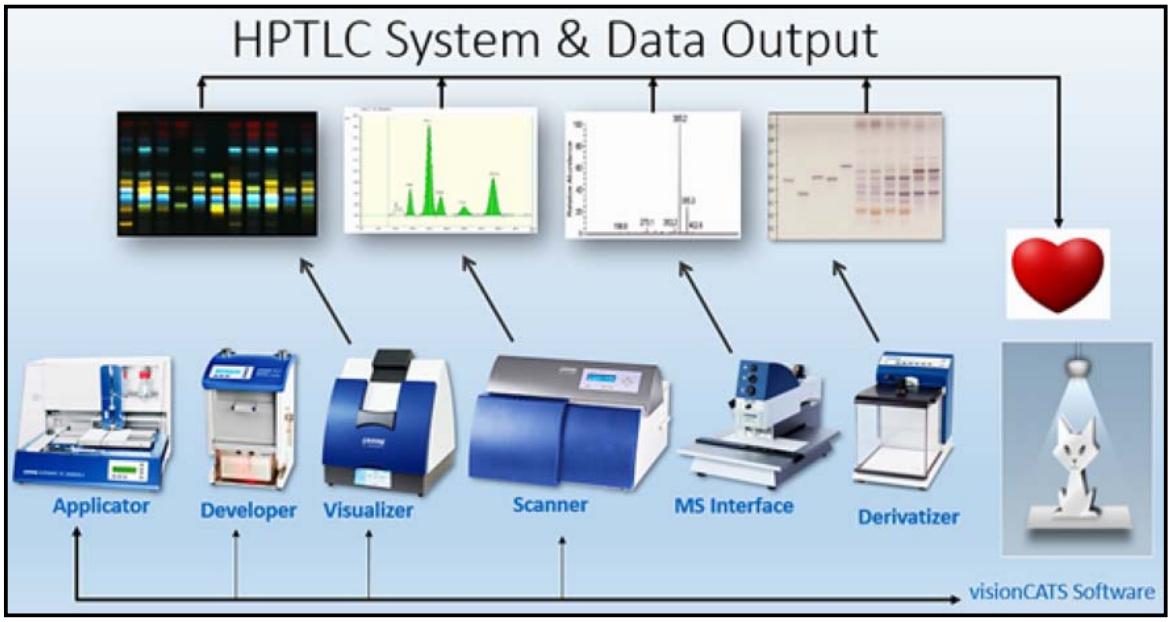
Report on visit to Anchrom Enterprises Pvt. Ltd. For CAMAG-HPTLC Training

Date of visit	20th January 2023
Place of training	Anchrom Enterprises Pvt. Ltd, Mulund, Mumbai
Coordinators from college	Dr. Pintu Prajapati Mr. Praful Dedhiya
Approved by	Dr. Shailesh A. Shah, Principal
Participating students	10 students of 4th semester M.Pharm (Pharmaceutical Quality Assurance) 1. Parmar Avni 2. Rohit Jenisha 3. Dixit Varsha 4. Gandhi Kruti 5. Pillai Arya 6. Rana Bageshree 7. Jariwala Hetal 8. Salunkhe Minal 9. Mistry Nimisha 10. Rohit Vrushti
Accompanying faculty member	Dr. Pintu Prajapati Ms. Dhrumi Naik
Coordinators from Anchrom	**Mr. Ramakant Yadav** (Application Chemist) **Dr. Saikat Mallick** (Assistant Manager -Development)

A comprehensive HPTLC training program at Anchrom, Mulund, Mumbai who is a leading CAMAG HPTLC instrument supplier in India, from CAMAG Switzerland with applications in Pharma, Forensics, Foods, Chemicals, etc. was organized by Maliba Pharmacy College on 20th January 2023. There was total ten students from M.Pharm, Pharmaceutical Quality Assurance department with two faculty member Dr. Pintu Prajapati, Ms. Dhrumi Naik who successfully coordinated the training program.

The journey was started at 12:30 AM from Bardoli and reached our destination at 10:20 AM. As we entered to Anchrom we were taken to conference room and breakfast was provided after that they introduced us to Mr. Ramakant Yadav, Application Chemist Anchrom. Whole training program was conducted by him which was divided into two sessions. The first session was presentation on HPTLC, and second session was of demonstration.

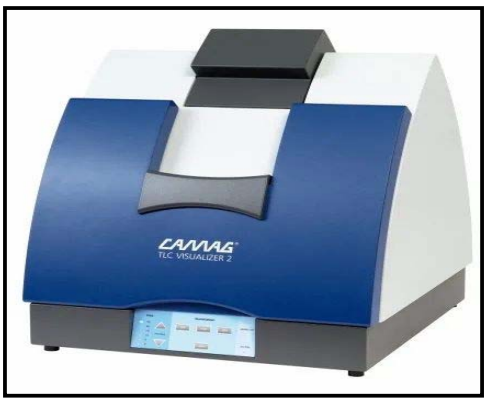
First session was started at 10:30 AM in which a presentation was given on HPTLC covering the basic principle of HPTLC, Introduction to stationary phase and mobile phase, other chromatographic techniques, advantages of HPTLC over other Separation techniques, general steps involved in chromatographic separation in which a detail information was given on techniques like Quantitative (for fingerprinting), In-situ clean up (for fatty materials), Micro preparative isolation, and Superimpose techniques, then brief information was given on working of different instruments for sample application, development (through AMD, ADC and twin trough chamber), scanning, drying, visualization and two derivatization techniques: dipping and spraying were explained, in case of spraying 2 mL and 4 mL of derivatizing reagent is required for 20×10 mm and 20×20 mm plates respectively and 200 mL of derivatizing reagent is required in case of dipping technique. We were also briefed about two softwares namely Win Cat and Vision Cat. Few examples are given for separation of herbal samples using derivatizing reagent for visualization.



Then few of our queries regarding plate drying and solvent grades to be used were solved and they gave detailed introduction of HPTLC methods and instruments along with references of some books for more detailed information here we ended our first session at 12:55 PM and then they had arranged a delicious lunch for us.

The second session (demo session) was started at 1:45 PM. For this session we were taken to Anchrom laboratory area where we have seen different instruments like CAMAG Linomat 5 sample applicator, CAMAG TLC visualizer 2, CAMAG automatic TLC sampler 4, CAMAG ADC 2 (Automatic developing chamber), AMD 2 (Automated multiple development), Ductless fume cabinet ChemCap Clearview, and CAMAG TLC-MS interface 2.

- **CAMAG Linomat 5 sample applicator:** In CAMAG Linomat 5 samples are sprayed onto TLC/HPTLC plates in the form of bands with nitrogen or compressed air. Application is automatic, only changing the syringe (filling, inserting, and rinsing) is manual. The Linomat 5 is suitable for small sample throughput.



- **CAMAG TLC visualizer 2:** Professional imaging and documentation system for TLC/HPTLC chromatograms and other planar objects with a state-of-the-art digital CCD camera, connected by USB 3.0.

- **CAMAG Automatic TLC sampler 4:** Its fully automatic sample application for qualitative and quantitative analyses as well as for preparative separations onto TLC and HPTLC plates. Sample can be applied as bands, spots or rectangles using the spray on technique.

- **CAMAG ADC 2 (Automatic Developing Chamber):** The ADC 2 is a device for reproducible plate development. It performs the development step fully automated, and independent of environmental effects. It also offers the activity and pre-conditioning of the layer, chamber saturation, developing distance and final drying can be present and automatically monitored by the ADC-2.

- **AMD 2 (Automated Multiple Development):** It is a software controlled HPTLC chamber for gradient development. It is used for difficult separation problems that cannot be solved by isocratic HPTLC.

- **Ductless fume cabinet ChemCap Clearview** : Ductless fume cabinet or hood to contain and remove hazardous fumes, vapours, gases and/or particulates in your laboratory turn to Chemcap Clearview.

- **TLC-MS Interface 2:** It enables users to directly analyze zones from TLC and HPTLC plates by Mass Spectrometry. A substance confirmation can be obtained in less than a minute.

- **HPTLC Pro Module Application:** It has a capacity of up to 75vials, the module application is designed for autonomous application of multiple samples on up to five different plates. Laser controlled application of a sample at optimal spraying distance and dosage speed vary, ensuring a highly precise application of samples as narrow bands and avoids cross contamination. The syringe is cleaned after each application of a sample. The built-in conveyor transports an applied HPTLC glass plates from the module application to the module development.

A demo was given for estimation of caffeine in tea sample by using vision cat software, Linomat 5 sample applicator, twin trough chamber, Plate heater, CAMAG Visualizer and CAMAG scanner using Toluene: Acetone (8:2) as a mobile phase.

After the demonstration we again gathered in conference room where we meet Dr. Saikat Mallick discussed about importance of HPTLC in separation and estimation of different samples and training certificates were given to all of us as a token of appreciation. Dr. Saikat Mallick was felicitated by Dr. Pintu Prajapati with token of thanks. Lastly, we had tea and biscuits and ended the training by clicking a group picture with Anchrom team at 4:15 PM.

Dr. Saikat Mallick was felicitated by Dr. Pintu Prajapati with token of thanks

Group picture of faculties, students with Anchrom team