

Name:- Siddhi Pawar

Roll No:- (45)

(45)

INDUSTRIAL VISIT REPORT

VENUE : Merck Lifesciences Pvt. Ltd.

DATE: 11th October 2024

NO. OF STUDENTS : 50

FACULTY : Dr. K. N. Mundlod Sir , Dr. G. B. Jadhav Sir, Mrs. A. A. Bachhav Mam

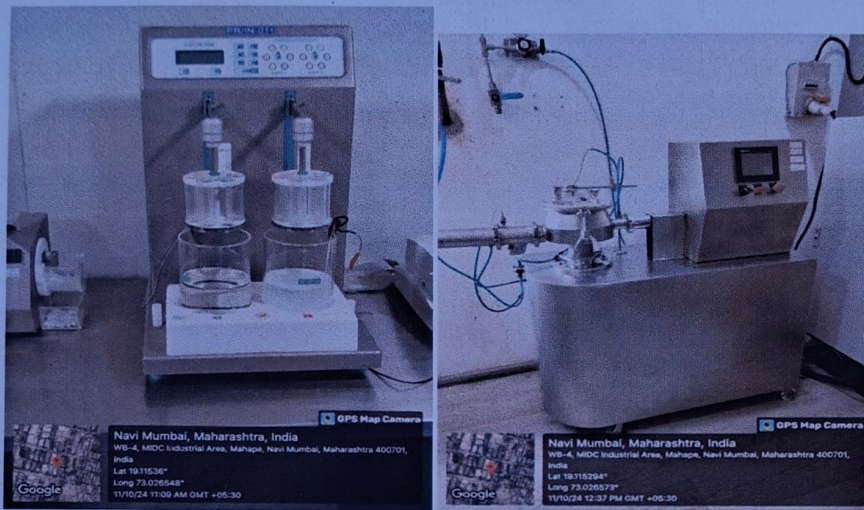
OVERVIEW



MVP Samaj's College Of Pharmacy , Nashik organized an industrial visit on 11th October 2024 at Merck Lifesciences Pvt. Ltd. , located in Nerul , Navi Mumbai for the students of fourth year B. Pharmacy. Industrial visit was carried out at Merck Lifesciences Pvt. Ltd. For enhancing practical and industrial knowledge of students. The main objective behind the visit was to make students aware about practical skills which are required in Pharma Industry and make them aware about the various opportunities and facilities in the industry . Around 50 students and 3 faculties visited the industry . The trip begin from MVP's campus from 05:00 AM and reach there around 10:00 AM .

The industrial visit was held at Merck Lifesciences Pvt. Ltd. With the motive of providing the students a practical experience about the real corporate world . After reaching there students were welcomed by the company with sweet gesture and snacks . Students were divided into 5 groups as A , B , C , D , E. And the following activities were carried out :

- Solubility enhancement technology demo. Hot melt extrusion / 3D printing.
- Merck company presentation.
- Direct compression process and challenges discussion.
- Analytical capabilities showcase : dissolution and separation chromatography.
- Manufacturing site round up.
- Feedback and close up.
- Photo session and see off.



ANALYTICAL TECHNIQUES AND EQUIPMENT :

a. HPLC (High Performance Liquid Chromatography):

Use for the separation , identification and quantification of compounds in a mixture . Widely used for the analysis of excipients and API. It is also used for method development and identification of unknown compounds .HPLC data can be used to complement gas chromatography or be an excellent alternative to GC when the components are non-volatile or would thermodynamically decompose under high temperatures. In order to separate mixture components ,HPLC takes advantage of partitioning between a mobile and stationary phase under a uniform pressure that is typically between 500 to 5000 psi. High pressure that is required to obtain a reasonable flow rate through the column .The process begins when a small amount of liquid sample is injected into the column that has a stream of liquid flowing through .

b. Tablet compression machine:

A tablet compression machine , also known as a tablet press , is a mechanical device that compresses powder into tablets of uniform size and weight.It's a key component in the pharmaceutical industry, where it's used to make tablet and pills from powdered materials.

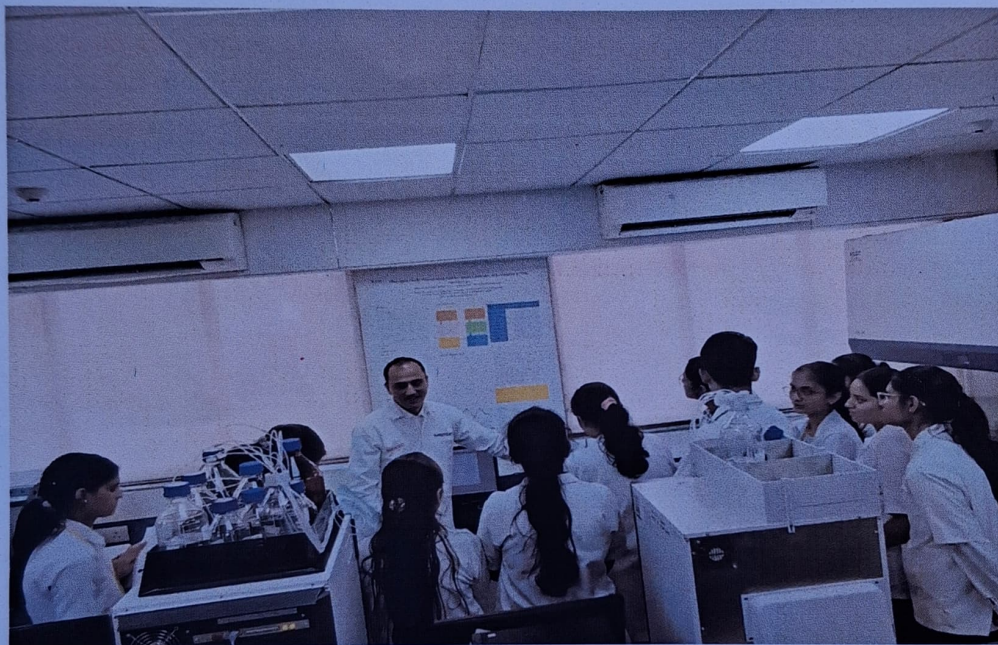
KEY HIGHLIGHTS :

The students come to know about the expertise of the company in the following fields:

Galaxy A35 5G

- i. *Parateck MXP , a polyvinyl alcohol –based excipient that significantly enhances the solubility of the active ingredients with poor availability.
- ii. Hot Melt Extrusion (HME) technology used to improve solubility.
- iii. Insight into advanced analytical techniques such as HPLC and NIR.
- iv. A comprehensive look at various tablet manufacturing processes.

This visit was an incredible opportunity to gain firsthand insights into the company's operations, particularly their Quality control and R&D departments. During the visit, we explored Merck's innovative solutions, including their Parateck excipients- a remarkable range designed for the pharmaceutical industry, known for their extraordinary functional properties.



CONCLUSION:

The visit provided a deeper understanding of cutting-edge pharmaceutical technology, and I'm grateful for the opportunity to learn from industry experts at Merck .

A special thanks to MVP Samaj College Of Pharmacy, Nashik for organizing this insightful visit !

An incredible efforts by Dr. K. N. Mundlod Sir , Dr. G. B. Jadhav Sir , Mrs. A. A. Bachhav Mam.

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