Report on Industrial Visit to Sun Pharmaceutical Industries Limited,

Madurantakam, Kanchipuram

As a part of B.Sc. and M.Sc. academic program an industrial visit was arranged on 7.3.2019, between 9.30am to 3.30pm to Sun Pharmaceutical Industries Limited, Madurantakam, Kanchipuram – 603306.

The students of B.Sc., III – year (20) and M.Sc., II year (30) along with faculty members (4) of chemistry department were visited water purifier systems, warehouse, reactors, quality control lab, instrumentation lab and microbiology laboratory of Sun Pharma in two batches.

Batch I (B.Sc – 9 students and M.Sc. - 14 students) and 2 faculty members visited the Sun Pharma facility in FN session and Batch II ((B.Sc – 10 students and M.Sc. - 13 students) along with the other 2 faculty members visited in the AN session.
Mr. Mariappan, Quality Assurance Unit, Sun Pharmaceutical Industries Limited given a power point presentation, elaborating the facility, activities and safety measures need to be taken during the visit. The students and faculty members of chemistry department were instructed to follow the safety measures with utmost care since toxic substances were handled in the laboratory. The Sun Pharma manufactures Non sterile API & Intermediates.

Students were taken to warehouse where the raw materials have been stored in different temperatures according to its storage requirement. There are four divisions of Material Storage Facility they are:

- Ambient Condition Storage
- Controlled Room Temperature
- Finished Goods Storage
- Cold Storage

The raw materials which do not satisfy the requirement were sent to the rejection area which was completely protected from accessibility.

The reactors operating with high (79°C) and very high temperature (>135°C) were shown during the visit.
The well equipped quality controlled laboratories with the following amenities were shown.

**Testing of Raw Material, Packaging Material, Intermediates, APIs.**

- **Key Software**
  - Empower 3 / Lab X / Lab Solution / LIMS
- **Instrument lab**
  - HPLC / UPLC / GC / FT-IR / UV Spectrophotometer
  - Wet Chemical lab
  - Polarimeter
  - Autotitrator
  - KF / Melting point
  - Malvern Mastersizer
- **Stability Chambers**
  - Walk-in stability chambers
  - Stability Chambers
  - 100% UPS back up
The students were taken to microbiology labs which were equipped with filters of 0.3 micron size at many places inside the lab. **Microbiology Lab is also equipped with**

- Autoclaves
- Incubators
- TOC & Conductivity Meter
- Laminar Air Flow Module
- **Tests Performed**
  - Environment Monitoring
  - Microbiological Limit Test
  - Water Testing

The finished products were placed in a storage unit maintained at ambient temperature condition.

During the visit, the students were learned about the safety issues, procuring of the raw materials and the storage and final batch of products. They had the opportunity to look at the reactors and bulk scale production of the systems and understood about the significance of maintaining good laboratory practices. Also they understood the functioning of QC and control of QA departments towards the final quality. The students interacted well with the demonstrators and the industrial visit to Sun Pharmaceutical Industries Limited was found to be beneficial for both B.Sc. and M.Sc. students as they were exposed to new technologies and experienced the real scenario behind the drug synthesis. The experience of the visit was amazing and more encouraging towards industrial functionality. The visit encouraged and motivated the students for their job placements.

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