

REPORT WRITING

INDUSTRIAL VISIT
TO CHAITANYA
PHARMACEUTICS

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Chaitanya Pharmaceuticals Pvt. Ltd. - Office, Satpur MIDC Rd,
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Objective: To gain insights into the manufacturing process of Ayurvedic products, from raw materials to final products



ABOUT THE COMPANY:

Chaitanya Pharmaceuticals Pvt. Ltd. is a leading manufacturer in the field of Herbal Extracts, Aayurvedic, Proprietary and Generic Medicines.

It is an Aayurvedic G.M.P. Certified Company, approved by F. D. A., Maharashtra State and complies with Schedule 'T'. We provide 250 different products in the form of Ghana Satwa (Concentrated Aqueous Extracts of single Herbs), Proprietary Tablets, Syrups, Bhasma, Rasayan Kalpa, Guggul Kalpa and other medicines.

This Chaitanya pharmaceuticals industry makes many ayurvedic products Their were many sections in the industry such as-

1. Raw Material Section-

The first stage of the production process begins in the raw material section. Here, the herbs and other natural materials used for Ayurvedic products are carefully selected and prepared. The materials sourced are typically:

- Herbs and plant materials: These include roots, leaves, barks, and flowers.
- Minerals: Certain Ayurvedic products use naturally occurring minerals, which are purified and processed.

In this section, raw materials undergo preliminary cleaning and sorting to ensure the quality and purity required for manufacturing.

2. Polyizer (Pulverizer)

Once the raw materials are cleaned, they are processed in a pulverizer or polyizer. This machine helps reduce the size of the raw materials into finer particles for easier extraction and further processing. The pulverization process ensures that:

- The raw materials are reduced to the necessary granule size.
- Finer particles increase the efficiency of extraction during the next stage.

3. Extraction Section

The extraction section is a crucial phase in the production of Ayurvedic products. It involves obtaining the active ingredients from the pulverized materials. The key equipment used in this section includes:

- **Boiler:** The boiler heats up water or other liquids to create steam, which is used for extraction purposes.
- **Evaporator:** After extraction, the evaporator helps concentrate the liquid by removing excess water, ensuring that only the essential components of the extract are retained.
- **Condenser:** The condenser cools down the steam from the boiler and converts it back into a liquid form, preserving the extracted materials.

This section involves careful monitoring to ensure that the active ingredients retain their potency.

4. Wet Grinder Section

In the wet grinder section, additional materials such as herbs, seeds, or other plant products are further processed. The wet grinder helps in:

- Grinding materials into a paste or fine texture, which is essential for specific Ayurvedic formulations.
- Ensuring consistency in the texture of the ingredients used in pastes, tablets, or liquid products.

The wet grinder is a critical tool for producing the correct formulations required for specific Ayurvedic products.

5. Tray Section-

In the tray section, materials are arranged systematically on trays before entering the drying phase. This allows even distribution and drying of herbal extracts or formulations. The trays are designed to allow for proper air circulation, ensuring that the materials dry uniformly.

6. Electric Dryer and Hot Air Oven-

After the raw materials are placed on trays, they are transferred to the electric dryer and hot air oven, which are essential in reducing the moisture content of the materials:

- Electric Dryer: Uses electricity to generate heat, drying the herbs and reducing moisture levels.
- Hot Air Oven: Utilizes heated air to dry the materials. Hot air is circulated in the chamber to evenly dry the raw materials or semi-finished products.

Both of these processes are important to maintain the quality of the materials and ensure that no moisture remains, which could otherwise affect the product's shelf life.

7. Multimill and Powder Conversion-

Once the drying process is complete, the dried materials are transferred to a multimill, where they are finely ground into powder form. This powder serves as the base for further processing. The multimill is important because:

- It produces uniform powder with the desired particle size.
- The fine powder is easier to process in the later stages, especially for tablet making.

8. Tablet Punching Section-

In the tablet punching section, the powder obtained from the multimill is converted into tablets. The key equipment used here includes:

- Hopper: The powder is loaded into a hopper, which feeds it into the tablet-making machine.
- Tablet Punching Machine: The machine converts the powder into tablets at a high speed. Typically, one round of the machine produces approximately 400 tablets per minute.

The machine is set to ensure the uniform size and weight of each tablet. This process is vital for ensuring consistency in dosage across all tablets produced.

9. Coating Section-

The tablets then undergo a coating process to provide a protective layer, improve their appearance, and control the release of active ingredients. In this section, coatings are applied using:

- Isopropyl Alcohol and Phenyl Dichloride: These are the key chemicals used in the coating process to ensure the stability and effectiveness of the product.

The coating also helps protect the tablet from environmental factors such as moisture and light, preserving its efficacy over time.

10. Punch and Store (Quality Checkup)-

After coating, the tablets are sent for quality inspection. In the punch and store section, each batch is checked for defects, such as incorrect size, shape, or color. Quality checks are performed to ensure that only perfect tablets are sent to the market.

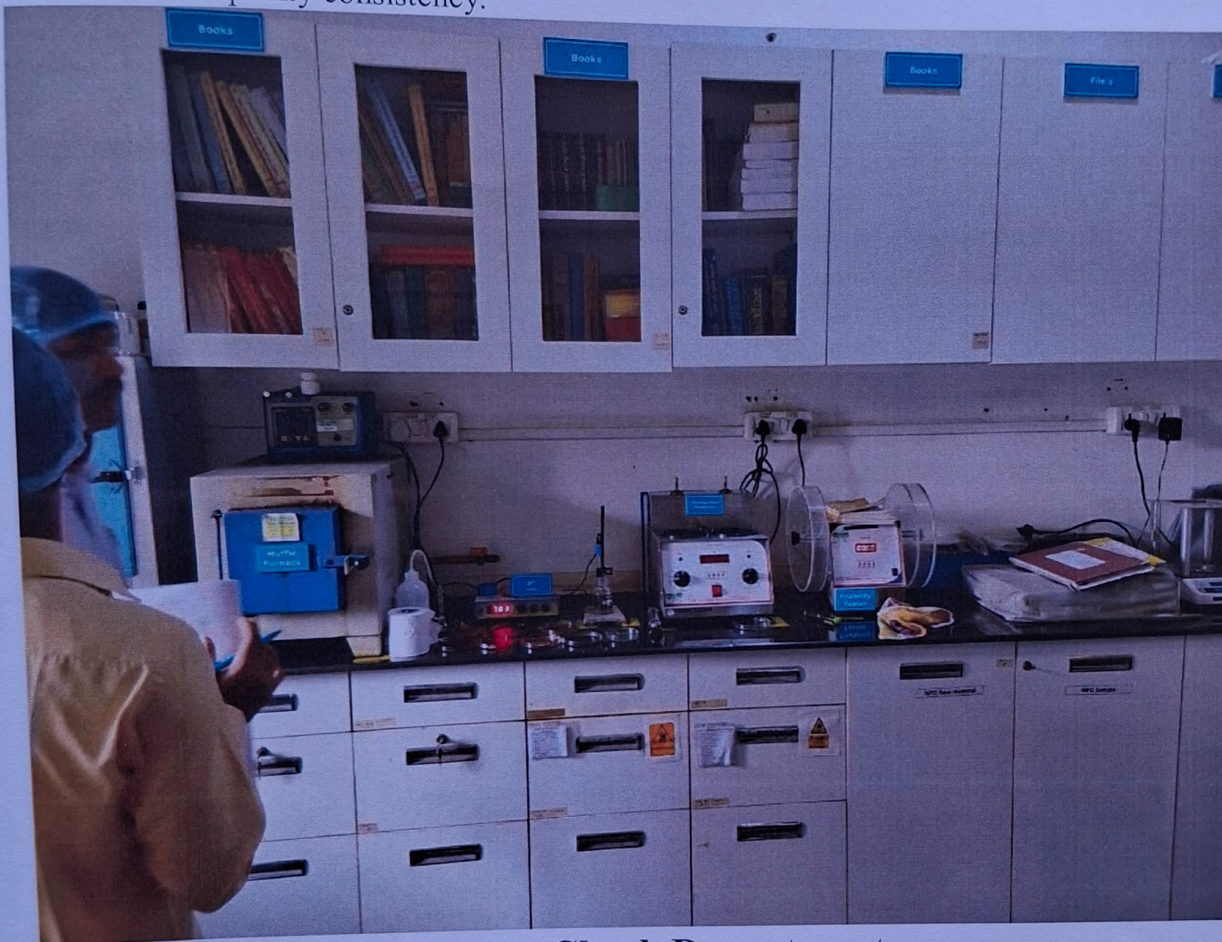
11. Quality Check Department-

This department ensures that the products meet industry standards. Several parameters are checked, including:

- pH Level: To ensure the chemical stability of the product.

- Disintegrability: Measures how quickly the tablet breaks down once consumed.
- Friability: Tests the tablet's ability to withstand mechanical stress during packaging and shipping.
- U.V. Cabinet: Uses ultraviolet light to test the product for contamination or impurities.
- Hardness: Ensures the tablets are strong enough to withstand handling but will dissolve as required.

Samples from each batch are tested, and the results are compared to standard samples of herbs to ensure quality consistency.



Quality Check Department

Green Zone and Yellow Zone (Pollution Management)-

Ayurvedic product-making industries often follow strict pollution control measures to ensure minimal environmental impact. The facility you visited may have the following zones:

- **Green Zone:** This zone refers to areas with no or minimal pollution. In the context of manufacturing, green zones are typically areas where clean processes (like packaging or

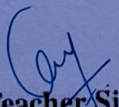
quality testing) are carried out. These zones are kept free from pollutants to ensure the purity of the product.

- **Yellow Zone:** The yellow zone is a controlled area where moderate levels of pollution can occur due to processes like grinding, drying, or chemical usage (as in the coating section). The facility uses appropriate ventilation and air purification systems to keep pollution levels within acceptable limits, ensuring worker safety and environmental protection.

CONCLUSION-

The industry visit provided a comprehensive understanding of Ayurvedic product manufacturing, from raw material processing to tablet production and quality checks. The facility demonstrated a seamless blend of traditional practices with modern technology, ensuring high-quality output through stringent quality control measures. Additionally, the company's focus on environmental sustainability, with green and yellow zones for pollution control, reflects its commitment to responsible production. Overall, the visit showcased the industry's dedication to producing safe, effective, and environmentally conscious Ayurvedic medicines.

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