MASTER COPY

A. Covering Page

SITE MASTER FILE

SOTAC PHARMACEUTICALS PVT. LTD.

Reg. Office & Factory	Plot No.: PF/21, Sanand GIDC-II, Opp. Teva Pharma, City: Sanand- 382110, Dist. – Ahmedabad, Gujarat State, India.
Contact No. (O):	9913562852, 8530372572, 9879807120
E-Mail & Website:	sotacpharma@gmail.com www.sotacpharma.com
Facility	General Departments (Tablets, Capsules, Oral Liquid & External Preparations)
Effective Date	30/06/22
Review Date	29/06/24

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NOTE: In case of need any above mentioned annexures kindly contact to below mail ID:

sotacpharma@gmail.com

D. Approval of Site Master File:

This Site Master File is a master document, which describes the entire facilities and details of the validation & qualification activities, manufacturing, packaging and analysis available at **SOTAC PHARMACEUTICALS PVT. LTD. PLOT NO.: PF/21, SANAND GIDC-II, OPP TEVA PHARMA, City: SANAND- 382110, DIST. – AHMEDABAD, GUJARAT STATE, INDIA.**

The following have approved this Site Master File:

Activity	Name/ Designation	Signature	Date
Prepared By:	Chandani Bhavsar Sr. officer-QA	Chandani	30/06/22
Approved By:	Jatin Vadera Sr. Manager- QA		30/06/22
Authorized By:	Rasila Amin Sr. Manager-QA		30/06/22

E.1.0 GENERAL INFORMATION:

E.1.1 Brief Information:

SOTAC PHARMACEUTICALS PVT. LTD. is a well-established professionally managed pharmaceutical company. It is a pharmaceutical products manufacturing company with plant located at **Plot No.: PF/21, Sanand GIDC-II, Opp. Teva Pharma, City: Sanand-382110, Dist.-Ahmedabad, Gujarat State, India**.

The facilities are well equipped with latest plant machineries, instruments & equipment's.

E.1.2 Name and Address

E.1.2.1. Address of Plant and Regd. Office:

Plot No.: PF/21, Sanand GIDC II, Opp. Teva Pharma, City ,Sanand - 382110, Dist.- Ahmedabad, Gujarat State, India.

- E-mail: **sotacpharma@gmail.com**
- Website: **www.sotacpharma.com**

E.1.2.2. 24 hrs contacts telephone No.:

Name Of Person	Telephone Nos.
Mr. Sharad Patel (Managing Director) **Address: -** 68, Vaibhav bunglows Part-2, Nr. Sun & step Club, Ghatlodia Ahmedabad-380061	9913562852, 079-27452379 9081993300 9081993377

E.1.2.3. Identification number of the site:

CIN	U24230GJ2015PT085451
DUNS	876894019
FEI NO	3014454532

E.1.2.4. GPS Details:

Latitude	22.9797583	North: 22°58'47.1"
Longitude	72.2474630	East: 72°14'50.9"

Map location attached as Annexure-I.

E.1.3 Short Description of the Site:

E.1.3.1. Location and immediate environment:

The factory is situated in the center of Pharma zone of Sanand GIDC, Ahmedabad and the production facility is located in a clean area away from polluting industries. The surrounding atmosphere is free from dust & smoke.

E.1.3.2. Site and Building Description:

The factory is situated at Sanand GIDC II, which is about 25 km from Ahmedabad and well connected with road from Ahmedabad. The newly constructed Plant is scattered over the area details given below:

- **Area Details**

Sr. No.	Block / Department	Area
1.	Plot Area	2791 Sq. mts.
2.	Total construction Area	4186 Sq. mts.
3.	Production block- Oral solids	1395 Sq. mts.
4.	Production block- Syrup, External Preparations	1395 Sq. mts.
5.	Quality Assurance & Quality Control.	150 Sq. mts.
6.	RM/SPM/FG Stores	1300 Sq. mts.
7.	Administration	64.31 Sq. mts.
8.	Utility/Service Floor	606.81 Sq. mts.

E.1.4 Key Personnel:

The details of key personnel is described below –

Key Person Name	Designation	Contact
Mr. Sharad Patel	Director	**9913562852**
Mr. Dinesh Gelot	Director	**9879807120**
Mr. Vishal Patel	Director	**8530372572**
Mr. Chetan Patel	Director	**9099024338**

Total experience and role responsibility is attached as **Annexure –II.**

E.1.5 FDA Licensing Activities:

All the Pharmaceutical Manufacturing Activities will be carried out as per Schedule–M of the Indian Drugs & Cosmetics Act 1940 and rules there under.

Manufacturing License No.G/25/2169 & G/28/1587 under the drugs and cosmetic act, 1940 certified that license no. on form 25 & Form 28 for the manufacturing of Tablet, Capsule, Syrups & External preparations granted by Drug controller cum Licensing authority Gujarat. The plant is started its manufacturing in 2016 with compliance of cGMP and cGLP.

The entire project has been designed in such a manner that it complies with the cGMP requirements / guidelines of World Health Organization (WHO), Schedule-M requirements of Indian Drugs & Cosmetics Act and other relevant regulations.

SOTAC Pharmaceuticals Pvt. Ltd. is engaged in manufacturing of general (Non Beta-lactam) four types of dosage form & List of proposed Products is attached as **Annexure-III**

1. Tablets
2. Capsules
3. Syrups

4. External Preparations

- Regulatory Details (Facility-Approval)

REGULATORY	CERTIFICATE NO.	YEAR OF APPROVAL
FDA	FORM-25(G/25/2169), FORM-28(G/28/1587)	OCTOBER 2016
WHO-GMP	20022072	JUNE 2020
KENYA	PPB/INS/GMP/LET/192/20-21	JANUARY 2021

E.1.6 Any Other Manufacturing Activities carried out on the Site:
Apart from manufacturing and trading of human pharmaceutical dosage forms, no other activities or business under taken in the location.

E.2.0 QUALITY MANAGEMENT SYSTEM OF THE FIRM

E.2.1 The Quality management system of manufacturer

- SOTAC Pharmaceuticals Pvt Ltd.manufacturing drugs under the control of a quality management system as per the guidelines stated in the company quality policy & quality manual. We follow Schedule "M" of Drugs and Cosmetics Act of the India and various WHO TRS Guideline.
- The purpose of the quality policy is to ensure compliance of quality systems and procedures so that the product meets all the required specifications ensuring the quality, identity, strength, safety & purity of the products through well-defined Quality Assurance and Validation system.
- The quality assurance department is independent from manufacturing & authorized to take appropriate decisions on quality matters of raw materials / packing materials / finished products, systems, documentation and validation or any other issues related to quality.
- The company shall establish and maintain high standards of Quality of its products manufactured, meeting cGMP and cGLP norms.

E.2.2 Quality Policy and management

- Our quality policy is based on cGMP guidelines, laws and regulations governing the manufacture of pharmaceutical products.

- SOTAC Pharmaceuticals Pvt. Ltd. Being a pharmaceutical company is engaged in;

"To create good manufacturing practices to generate quality which is conceived as process of continual improvement to strive towards excellence and achieve highest standards of quality by implementation of small innovative mechanisms and processes in order to accomplish best quality and customer satisfaction"

- Head QA/Plant Head are directly and individually reporting to the top management (MD). Quality of the products and continuous improvement in quality is driven by top management. It is monitored and reviewed by them regularly.

  - **Responsibilities of Quality Assurance:**
    The Quality Assurance Department has responsibility and authority to define norms and regulations for various activities including review of manufacturing activity, approval and rejection of RM, PM and FP, Personnel Training, Sanitization and Cleaning of General Areas. Quality Assurance Department

reviews the production records including analytical records to ensure that all the manufacturing operations are carried out as per the laid down instructions.

- **Standards Used by Company:**

– The company shall establish and maintain high standards of Quality of its products manufactured at various locations including those at contract manufacturing sites, meeting cGMP and cGLP norms.

– Product shall be manufactured and marketed meeting all quality parameters related to quality, identity, purity, safety and efficacy through well-defined Quality Assurance and Validation system.

– Company shall comply with current National and International regulations as applicable and continuously move towards meeting stringent global standards.

– Major thrust shall be given on Quality Up-gradation and Product Integrity on continuous basis to achieve higher level of customer satisfaction. Continuous training shall be given to the employees in the organization to enhance their skills in performing their assigned tasks.

E.2.3 Release Procedure of Finished Products:

E.2.3.1. Detailed description of qualification requirements (education) of the authorized person (s) / qualified person (s) responsible for batch certification and releasing procedures:
Person involved in batch release process /activity shall be minimum Science/Pharmacy Graduate. Training shall be given & Authorized by QA Manager / QA Head for Batch Release. Batch release authorization shall be given to limited quality persons only.

E.2.3.2. General Description of batch certification and releasing procedure

- As soon as any batch has been finally packed, these samples are tested against approved specifications by the Quality Control Department. If the samples meet the specifications, the Quality Control Department certifies the batch as approved.

- The BMR is reviewed by the Quality Assurance Department including Q.C. Data for the completeness of the document and for the compliance with cGMP at various steps / deviation (if any). On the satisfaction review that the Batch Record was completed and the batch was manufactured and complying with all GMPs and SOPs, the QA Department releases the batch for further distribution.

E.2.3.3. Role of authorized person/qualified person in quarantine and release of finish products

- Quarantine and release are separate to each other. There are appropriate labels on the finished products with signature of authorized persons. It is monitored and controlled by authorized person.

- On receipt of Finish goods Transfer Slip, QA department shall check and ensure following points.

  - Verify the Finished good transfer Slip against BMR for Batch No. Mfg. Dt., Exp. Dt. Quantity.

  - Verify the quantity of packed finished goods against Finish goods Transfer Slip and check for correct coding of label on shipper as per Batch Packing Record.

- QA department shall check the quantity of loose shipper as per Finish Goods Transfer Slip for quantity verification. Sign the Finish goods transfer slip and hand over to finish goods store in charge.

- Once QA releases the batch, Finish goods are transferred to Finished Goods Store.

E.2.3.4. The arrangement between authorized persons / qualified persons when several authorized persons/qualified persons are involved

Q.A. Head/Manager/Designee is responsible for planning of batch release. He/she plan the work for the day and allocate the responsibility to any one authorized persons (Q.A. Head/Manager/Designee) to release the batch for that particular day. No more than one person is involved in the batch release at time. One batch is completely reviewed and release by one single authorized persons. Part release or more than 1 person is not allowed to release single batch of Finished Pharmaceutical Products.

E.2.4 Management of suppliers and contractors

E.2.4.1. A brief summary of the establishment/knowledge of supply chain and the external audit programme:

We have manufacturer and supplier of RM and PM are competent and capable enough for delivering material on time and we can succeed our planning of production and supply of finish goods to the end of customer.

- **Vendor Audit:** Vendors are supplying the material since long. However, In case of critical or starting of raw material and packing materials import, We organizes visit/pre approve checklist to vendor's premises / plant to audit by Q.A Department for its capabilities to supply consistent quality materials. Vendor approved as per SOP procedure (SQA073) and approved vendor list will be updated regularly.

E.2.4.2. A brief description on the qualification system of contractors, manufacturers of APIs and Excipients, primary and secondary packing material suppliers:

- **For manufacturers and Supplier Qualification:** Upon receipt of sample & Certificate of Analysis (COA) from Manufacturer, COA shall be reviewed & sample shall be tested by QC department and evaluated. After Approval of sample, the material shall be procured from the manufacturer.

E.2.4.3. Measures taken to ensure that products manufactured are compliant with transmitting animal spongiform encephalopathy and Basils animal spongiform encephalopathy (TSE/BSE) guidance:

Manufacture will send the TSE and BSE certificate at the time of Vendor Approval as a part of vendor qualification, this is included in vendor questionnaire for manufacturer to provide TSE/BSE and other compliance certificate.

E.2.4.4. Measures adopted where substandard / spurious / falsely labeled / falsified / counterfeit APIs or Excipients, packing material are suspected or identified:

As per raw material and packing material receiving SOP, we check the material while receiving in warehouse; Quality control department before sampling of the materials also checks it. QA also check while giving the Line clearance before sampling. It is also checked by Warehouse, Production and QA department while dispensing of the materials. If any discrepancy was found QA shall be inform to vendor.

E.2.4.5. Use of outside scientific, analytical or other technical assistance in relation to manufacture and analysis:

Analytical assistance is taken from approved analytical testing labs for testing of few specific tests that cannot be carried out at the site.

List of No. of external party and address is attached as **Annexure-IV.**

E.2.4.6. AMC (Annual Maintenance Contract):

- Information regarding Annual maintenance contract shall be updated as per **Annexure-V.**

E.2.4.7. List of Calibration & Validation Services:

Some calibration/validation activity perform by external party that cannot be carried out at the site.

Information regarding **List of Calibration & Validation Services** Shall be updated as per **Annexure-V.**

E.2.4.8. List of major customer

List of **List of major customer** including the addresses and contract information Attached as **Annexure-VI.**

E.2.4.9. Agreement:

(Brief Overview of the responsibility sharing between the contract giver and acceptor with respect to compliance with the marketing authorization)

❖ **The Contract Giver:**

✓ The Contract Giver is responsible for assessing the competence of the Contract Acceptor to carry out successfully the work required and for ensuring by means of the Contract that the principles and Guidelines of GMP as interpreted in this Guide are followed.

✓ The Contract Giver will provide the Contract Acceptor with all the information necessary to carry out the contracted operations correctly in accordance with the requirements and any other legal requirements. The Contract Giver should ensure that the Contract Acceptor is fully aware of any problems associated with the product or the work which might pose a hazard to his premises, equipment, personnel, other materials or other products.

✓ Contract Giver will send additional technical details if required by Contract Acceptor.

✓ The Contract Giver will ensure that all processed products and materials send to Contract Acceptor complies with their specifications on terms of quantity and packing

❖ **The Contract Acceptor:**

✓ The Contract Acceptor must have adequate premises and equipment knowledge and experience, and competent personnel to carry out satisfactory work which ordered by the Contract Giver.

✓ The Contract Acceptor should ensure that all products or materials are tested, manufactured as per pharmacopoeia or in house specification.

✓ The Contract Acceptor should not pass any work to a third party, without the Contract Giver's prior evaluation and approval. Arrangements made between the Contract Acceptor and any third party should ensure that the information is made available in the same way as between the original Contract Giver and Contract Acceptor.

✓ The Contract Acceptor should refrain from any activity, which may adversely affect on product for the Contract Giver.

✓ The Contract Acceptor will permit Contract Giver for facility visit as & when required.

✓ The Contract Acceptor agreed to test the active pharmaceutical ingredients, excipients and finished pharmaceuticals products.

E.2.5 Quality Risk Management:

E.2.4.1 Brief Description of quality risk management (QRM) methodologies used:

- We follow ICH Q9 Guideline for the Quality Risk Management.

- The risks associated with processes, systems and equipment/instrument that have the potential to impact on product's safety, efficacy and quality compliance must be managed effectively.
- QRM helps to identify, analyse, evaluate, reduce and review the risk. It must not have impact on product safety, identity, strength, purity and quality.
- Use of quality risk management can improve to making the decision making on quality problem.
- An effective quality risk management approach is further ensure the high quality of the product to the patient by providing a proactive means to identify and control potential quality issues during development and manufacturing.

❖ For Quality Risk Management, SOP "Quality risk management" shall be followed.

E.2.4.2 Scope and focus of QRM including brief description of any activities which are performed

Always quality is top driven or management driven approaches. Quality risk management is understood and hence periodically risk associated with the quality are discussed and reviewed by senior management and top management. We follow ICH Q9 and SOP followed for Quality risk management. Training is given to the concern managers, executives and other staff associated with quality of the products.

E.2.6 Product Quality Reviews

E.2.5.1 Brief description of methodologies used

- Product Quality Reviews helps to lay down procedure for review the product manufactured during year to define the products produced are consistently manufactured & gives results as per predetermined specification limits.
- It also helps to understand product behaviour.
- Product Quality Reviews includes Raw materials, Packing Materials, in-process control, finished product testing results i.e. Description, DT, Dissolution, Hardness, Related Substances, Assay, Yield, Retain sample & stability results. It involves Deviation, Change Control Note, CAPA, Out of Specification, Out of Trend, Market complaint, Product Recall occurred during Year and also review of Marketing authorization, Post marketing commitments, Process capability, Equipment qualification status and Trend analysis. Data collected from above testing results & compiled in a Graphical or Tabular form.
- QA Executive / QA Manager will be owner of Product Quality Reviews.
- QA Manager – Administrator of Product Quality Reviews will maintain Product Quality Reviews schedule & Assemble section of Product Quality Reviews in final document.
- Critical components of Product Quality Reviews are Reference Tool, Quality improvement Tool, Management Tool for the organization.

E.3.0 PERSONNEL

E.3.1 Organizational Chart:

Organogram:

Organogram shows the structure of an organization and how the various positions are related to each other. It is frequently used to show the chain of command and relative ranking of various positions in an organization or department and may include information such as the job titles, names, and areas of responsibility for the employees.

The Organogram covering all departments is attached as **Annexure -VIIA.**

The list of competent staff is attached as **Annexure-VIIB.**

E.3.2 Employees Engaged in Production, Quality Assurance, Quality Control, Warehouse, Engineering and Personnel & Administration:

List of No. of Employees is attached as **Annexure-VIII.**

E.3.3 Basic and In-service Training and Maintenance of Records:

All the personnel working in the plant and whose job is directly or indirectly associated with product quality are given continuous cGMP training, appropriate to their respective job activities. The Head-QA in consultation with concern department Head develops comprehensive training schedule and programs for employees at all levels.

The personnel and administration department provide induction training to all the new employees for making them acquainted with the company's policies, practices and people, as per induction training schedule. Records of such induction training and the reports are maintained by the head of the department (Personnel and Administration). Also provide training like Induction for general orientation, Job Specific Orientation, On job training and personnel, Training on Standard Operating Procedures, GMP and Technical Training, Modular class room Training, Self-Training, Soft skills, Specific Training, External Training.

E.3.3.1 Training Record:

All the records pertaining to the training in prescribed formats are available with Quality Assurance Department. The Quality Assurance Department, maintains the records of cGMP training. Every department maintains the individual training records in case of job training of the employees of their own department.

E.3.4 Health Requirements for Personnel Engaged in Production:

E.3.4.1 Health Checking of Employee – Responsibility:

All personnel engaged in manufacturing should be free of any contagious disease or severe type of reaction with specific drugs.

All employees undergo a pre-employment medical examination before joining the company, carried out by the Medical Officer of the company. The medical examination consists of blood test, general examination and eye checkup including color blindness as per define procedure in SOP

E.3.5 Personal Hygiene Requirement:

E.3.5.1 Washing, Changing and Rest Areas:

Every person engaged in manufacturing activities has to comply with requirements of personal cleanliness and hygiene conditions to protect himself and the product. Suitable changing rooms and washing facilities are provided before entering the manufacturing area. Lockers are provided in change rooms for keeping clothes, foot wear and employee's belongings. The employees remove street footwear and keep them in the lockers provided. Employees (Operators & workman) remove the street clothes and keep them in the locker provided. Other employee (Staff) and visitors wear the dresses/over coat on their street cloths and changing the street footwear by factory foot wear. All employees wear Plant uniform and cross the step over bench while wearing factory foot ware and enter the plant to proceed to their respective work place through the airlock. Employees required to enter process area has to wear another foot wear in the second change room. Employees sanitize their hands, before entering the process area corridor to proceed to their respective work place (s).

E.3.5.2 Description of Clothing:

Appropriate lint free clothing is provided to the employees depending upon nature of their work. Employees are provided with factory full dress with cap and factory footwear. Masks for covering mouth and nose also provided where-ever necessary. Hand gloves are provided to employee who are coming in direct contact with products.

E.3.5.3 Change of Clothing:

Gowning and de-gowning instructions in the form of SOPs are kept in each of the change rooms. The person involved in manufacturing, QC shall change his/her clothes accordingly as per SOP.

E.4.0 PREMISES AND EQUIPMENT:

- **Premises:**

Premises have been designed, in such a manner that it complies with the cGMP requirements / guidelines of World Health Organization (WHO), Schedule-M requirements of Indian Drugs & Cosmetics Act 1940, other relevant regulations and manufacturing capacity in consideration. Premises and equipment are located, designed, constructed, adapted and maintained to suit the operation to be carried out. The layout and design is in such a way that it is aimed to minimize the risk of errors and permit effective cleaning and maintenance in order to avoid cross-contamination, any adverse effect on the quality of products.

- **Legibility of Plan:**

A plan of facility with indication of scale and names of the area is attached as **Annexure-IX.**

- **Nature of Construction and Finishes:**
  - **Narration of Plant:**

The building is made of Reinforced Concrete Cement (RCC), and designed such, that no beams or columns are visible in the manufacturing and testing areas.

- **Wall and flooring:** The walls of the plant are constructed of brick and plastered to provide a hard smooth finish and some wall made with clean room partisan and powder coated GE panel with minimized recesses. They are further painted with epoxy paint. Wherever possible, all floor and ceiling joints are "coved" to avoid any sharp edges, right angles.

- The Production, Quality Control / Assurance, Warehouse and the inter-connecting corridors – Kota stone has been used. Walls, floors and ceiling are constructed of hard non-porous non-shredding material using best quality of cement and concrete. These surfaces are able to withstand repeated hot water and detergent cleaning operations. All the surfaces are free from any holes or cracks. All surfaces of walls are flat and do not have any projecting features. All surfaces are finished with smooth non-pealing paints.

- **Coving:** To avoid vertical joints between floor and wall and wall to wall coving has been done which minimizes the risk of dust deposition.

- **Door & windows**: All doors are made of Galvanized M.S. sheet heaving PU paint coating with flushed door having flush glazed view glass panels and all the windows between process and non-process area are fixed in a fashion that no window projection is toward process area. From process to process area, the windows are fixed in centre of wall with proper slope on both side to provide easy cleanable surface, thereby eliminating dust accumulation.

- **Painting:** Three types of painting have been done. External paint is cement based water repellent paint. Internal Poly Urethane paint is applied in production and stores area. In QC & Administration Plastic & water proof paints are used.

- **Lighting, piping, Wiring & drainage system:** Conceal wiring and conceal lighting in the company. GI / UPVC / SS 316L pipe for potable water, PPRC pipe for compressed air, SS 316L electro polished pipe for purified water. Drainage system is two types one is domestic and other is ETP Plant. All piping with color coding system with its respective SOP.

- Premises have been designed by keeping cGMP, safety and manufacturing capacity in consideration. Premises and equipment are located, designed, constructed, adapted and maintained to suit the operators to be carried out. The layout and design is in such a way that it is aimed to minimize the risk of errors and permit effective cleaning and maintenance in order to avoid cross-contamination, any adverse effect on the quality of products.

- **Pest Control:** Termite treatment is done during construction to column and various grids / footings.as routine control the pest in facility As per SOP No.SPD009 "Integrated Pest management".

- **Preventive Maintenance of Premises:** The house keeping team has the charge to make the premises clean and tidy. An experienced supervisor takes the lead with his experience and makes sure that the premises is always clean. The same team takes care of pest control on regular basis and keeps the cleaning records as per the procedure mentioned in the SOP. The house keeping staffs are given training in regular intervals as per the cGMP norms.

E.4.1 Brief Description of HVAC System

The critical areas like processing and primary packaging areas where products are directly exposed are provided with HEPA filters of 0.3µ Rating with 99.97% efficiency. The Air Handling Systems are designed to maintain the temperature and humidity in the production areas.

The level of areas are provided with differential pressure based on their criticality level. The air flows from positive pressure area to negative pressure area. The processing areas have been provided with minimum of 20 air changes/hour. Recirculation rate 90 % recirculate air and 10 % fresh air.

- In Order to reach class 100,000 in clean zone levels, the number of air changes shall be set related to area of the room, size of the equipment and man-material movement.
- The requirement & limit for the area shall depend on the nature of operation carried out.
- Non-Viable / Air borne particle count level is as per ISO Class-8 facility "At-Rest" condition according with ISO 14644-3.
- Clean room ISO standards

Class grade	ISO CLASS	Air change per hours	Ceiling coverage
GRADE A	ISO 5 (100)	240-600	35-70 %
GRADE B	ISO 5 (100) at rest	240-600	25-40%
GRADE C	ISO 7 (10,000)	60-150	15-25%
GRADE D	ISO 8 (100,000)	5-60	5-15 %

***NOTE:** Differential pressure, Temperature and relative humidity in all area is maintained as per respected SOP (SQA0017, SQA0018).

Details of air handling unit attached as Annexure-X.

Type of Operations to be carried out of the Various Grades for Clean Preparations

Class	Type Of Aseptic Operations
1,00,000 (Grade D)	Sampling room, Dispensing, Production, Primary Packing and microbial lab
100 (Grade A)	For Reverse Laminar Air Flow at Sampling, Dispensing and microbial (LAF) area

E.4.1.1 Filter Design Efficiency and Alarms:

The supply line plenums are provided with a series of filters of rating 10µ and 3µ . The filters in production areas are HEPA filters of 0.3µ Rating and 99.97% efficiency. The return air risers are provided with filters of 10µ rating. The Micro-weave filters are changed in any of the following events: blockage/leakage of filters and CFMs out of limit.

E.4.1.2 Frequency of Revalidation of the System:

- The HVAC system is revalidated as below

Test parameter	Class	Max. time interval	Test procedure
Non-Viable Particle count test	≤ ISO 5 > ISO 5	6 month 12 month	ISO 14644-3
Air flow volume (ACPH)	All classes	12 month	ISO 14644-3
Air velocity (Unidirectional/non-unidirectional flow)	All classes	12 month	ISO 14644-3
Filter leakage test (Filter Integrity)	All classes	24 month*	ISO 14644-3
Recovery (clean up time)	All classes	24 month*	ISO 14644-3
Air flow visualization (air flow patterns)	All classes	24 month*	ISO 14644-3

* Those test is optional perform as when required or suggested.

- The system performance is routinely monitored through monitoring of pressure differentials, temperature / humidity conditions and microbiological monitoring of the environment.
- Viable particle count as per frequency defined in SOP of core area. (Trend will be incorporate of last 12 month in every year validation)

E.4.1.3 Design Criteria of Ventilation:

- The class of air in core processing area meets the requirement of Grade-D. Pressure differentials are maintained as per the specified Guidelines for the respective dosage forms. Temperature in all areas and Relative humidity in the different sections is as mentioned SOP NO.SQA0018.
- For HVAC system plan, refer **Annexure XI.**
- For Diagram of A.H.U., refer **Annexure XII.**

E.4.2 Brief Description of Water System:

Schematic diagram of water system generation and distribution is as per the **Annexure- XIII.**

- **Raw Water:**
  GIDC treated water is used as feed water of water system.
  Raw water is mainly used for toilets and miscellaneous activities.

- **Soft Water:**
  The raw water is treated using softener is transferred to soft water storage tank. From soft water storage tank, water is transferred to ultra-filtration storage tank through ultra-filter system. Finally, water from ultrafiltration storage tank is transferred to RO permeate water tank through RO-EDI system. The loops are made up of S.S. 316 material having facilities of sanitization.
  The Purified water is stored and continuously circulated at ambient temp. to the user points.

- **Specifications of Purified Water:**
  Purified Water should meets the specifications laid down in the IP, BP & USP. Samples are drawn every day, for analysis, from predefined sampling points.
  The purified water meets the following microbiological specifications

Sr. No.	Tests	Limits
1.	Total aerobic microbial count	NMT 100 CFU/ml
2.	Total yeast and mold count	NMT 10 CFU/ml
3.	E. Coli	NIL
4.	Salmonella	NIL
5.	S. Aureus	NIL
6.	Pseudomonas	NIL

The purified water is sampled to check the conformance of laid down specifications from the various sampling points. The locations of sampling point and the testing frequency is well defined in its SOP.

E.4.2.1 System design details

- The water system design has the following major stages of purification, distribution and control.
- Pre-treatment System for Filtration & softening of raw water to produce soft water.
- Generation System for soft water (MGF-UF-RO pass) and Purified Water (using RO pass -EDI).
- Storage and Distribution System for Production department, Warehouse, utility area and Quality control department.
- Programmable Logic Control for generation and distribution loop system. Water pretreatment is auto system.

E.4.2.2 The objective of pre-treatment is to treat raw water As below listed step for the final purification system as per SOP.

Pretreatment		**Treat water(RO SYSSTEM):**
• From UGWST • RW pump • NaOCl dosing tank • RW storage tank • Fitter feed pump • Multimedia fitter • Regeneration tank-1 • Softner-1 • Regeneration tank-2	• Pre guard fitter • Non oxidizing biocide dosing tank • Ultra filtration system • Sodium hypochloride • Dosing tank-caustic dosing tank • UF product water storage tank • UF backwash pump • UF product water transfer pump • Antiscalent dosing tank	• UF product water storage tank • UV light • Micron cartridge fitter • RO high pressure pump • RO unit-(To reject water tank and To product tank) • RO CIP tank • RO CIP pump • Micro cartridge fitter for CIP

• Softner-2 • Soft water storage tank • Soft water transfer pump	• DE chlorination dosing tank • pH correction dosing tank.	• RO unit • Electro de-ionization-(To product tank, To reject or disposal, To RO feed or disposal, To reject or disposal)

E.4.2.3 Brief **description of other relevant utilities such as steam, compressed air etc.**

- Air Compressor is used in Granulation for Fluid Bed drier / Fluid bed processor, for paste preparation, coating section and for packing operation.
- Compressed air is provided in filter cleaning area, drying and cleaning, pneumatic operation, granulation, compression, coating & blister packing area; it is free from oil & water, filtered from 0.1 and 0.01µ filter.
- Air compressors having individual capacity are installed in the utility area of the facility.
- They cater oil & moisture free compressed air to all production modules for processing equipment like, coater, Blistering machines, etc.
- These systems that come in product contact shall be qualified for presence of oil, moisture and microbial bio burden.

E.4.2.4 Description of ETP:

- Entire effluent is treated in a suitably designed effluent treatment plant and the treated effluent is recycled for usage in garden and tree plantation activities. No waste is discharged in the surrounding area. Flow diagram of ETP Plant, refer **Annexure-XIV**.

E.4.3 Equipment:-

E.4.3.1 Listing of major production and control laboratory equipment.

List of Major Equipments/Instruments attached as **Annexure-XV, XVI and XVII.**

E.4.3.2 Qualification, Validation and Calibration:

- **Qualification Policy:** All major equipment are qualified as per the written installation, operational and performance (wherever applicable) qualification protocols before taking them in actual operation. Equipment will be re-qualified after major repair, change in functions, as per their schedule based on criticality classification and shifted to other location Following is the approach of the organization for Qualification / Validation:

- **Design Qualification (DQ):** Demonstrates that the proposed design of the utility equipment, control system and selected components are suitable for intended purpose. It is the first element of the validation of new facilities, system, or equipment.

- **Installation Qualification (IQ):** The documented verification that the facilities, utility, control systems and equipment as installed or modified, comply with the approved design and manufacturer's recommendations. This provides documented evidence that all key aspects of the installation are adhered to the design intentions and that all equipment manufacturer's recommendations have been suitably considered.

- **Operational Qualification (OQ):** The documented verification that the facilities, utility, control systems and equipment's, as installed or modified, perform as intended throughout the anticipated operating ranges. This provides documented verification that the facility, utility, equipment, and other control systems operate as intended throughout its operating ranges.

- **Performance Qualification (PQ):** The documented verification that the facilities, utility, control systems and equipment's, as connected together, can perform effectively and reproducibly based on the approved process method and product specification.

- This stage is related to system performance in the production mode, using actual processing materials or data (for computers). Critical equipment's undergo extensive validation studies to ensure consistent performance depending on approved validation protocol.

- **Re-qualification Policy:** This provides the documented verification by re-ensuring of the equipment that it is working in accordance with qualification status.

- The **re-qualification period** may depend upon the equipment functionality as per define in SOP and also as per below condition

✓ After major modification in equipment.
✓ After relocation of equipment.

E.4.3.3 Cleaning & Sanitation:-

- **Brief description of cleaning and sanitation methods of the product contact surfaces (i.e. manual cleaning)**
- Each area in production undergoes cleaning as per the standard operating procedures on cleaning. The SOPs clearly specify the type of detergents to be used and the sanitizing agents with their concentration and frequency. Detergents should not used for the cleaning of the equipment's.
- All the equipment's are cleaned manually with purified water after use as per their cleaning procedure. The cleaning procedures are validated as per their protocol.
- **Validation of Cleaning Procedures:**
- Specific validated cleaning procedures for production equipment is included as part of the batch documentation and these procedures cover both between-batch and between-product cleaning.
- Machinery and equipment are kept clean during use by the operators. The operators are also responsible for cleaning. Machinery and ancillary equipment are kept in a clean condition even when not in use.
- Cleaning procedures for equipment are regularly validated as per worst case selection and methods are monitored routinely by chemical and microbiological methods.
- **Monitoring of Cleaning Procedure:**
  Monitoring of cleaning procedure shall be done as per respective SOP on cleaning.

E.4.3.4 Good Manufacturing Practices critical computerized systems: Description of GMP Critical computerized system (excluding equipment - specific programmable logic controllers (PLCs):
Currently we operate process equipment PLCs and keeping data manually.

E.4.3.5 Preventive Maintenance program:
The preventive maintenance is carried out as per the predefined frequency using duly Approved written procedures as define in SOP.

✓ **The key responsibilities are:**

- To provide uninterrupted support of utilities like power, chilled & D.M. water for manufacturing operation.
- To carry out planned preventive maintenance of all equipment's.
- To attend to breakdown & carry out repair jobs

- To calibrate measuring devices like pressure gauge, humidity tester & temperature record.
- To clean & change filter of A.H.U. System periodically as per SOP.

E.5.0 DOCUMENTATION:

E.5.1 Description of Documentation System:

- The entire documentation system of manufacturing & quality control is very comprehensive & well controlled to avoid any ambiguity and uncertainty in the plant and is described in "SOP on SOP".
- Standard operating procedure (SOP) on preparation, review, approval, authorization & control of SOP is available. Separate SOP on documentation preparation & data control is also available which describes the entire documentation system.
- A separate area, under lock and key arrangement, is provided for storage of documents. This area is under control of QA Department.
- Batch Manufacturing Record (BMR) & Batch Packing Records (BPR) are prepared and controlled by Quality assurance department.
- Specification, DRS and MOA are maintained and updated by QC department. Master Copy of the same is laying under control of QA department.

E.5.1.1 Preparation of document

- All document prepared according to relevant SOP and Formatting of document to be follow as per SOP NO. SQA001 SOP on SOP.
- The formatting of all documents are done as per written procedures related to specification, analytical methods, batch numbering records, batch packing records etc.
- **Responsibility:** Each department has its own specific activities along with, role/responsibilities of personnel, different relevant SOPs, different formats, etc. Each department develops their respective SOPs, checked by seniors, approved by Head of Departments / QA and approved by and Q.A. after review for compliance.

E.5.1.2 Control of document:

- All document control according to SOP no. SQA003 "Document control".
- **Responsibility:** QA department is responsible for control of all department document.

E.5.1.3 Revision of document:

- SOPs are reviewed after 3 years. In case of change, SOP with next revision number is issued and old SOP is withdrawn and is stamped as "Obsolete".
- Specification and MOA revised according to SOP and whenever pharmacopeia update.
- **Responsibility:** Each department has its own specific activities along with, role/responsibilities of personnel, different relevant SOPs, different formats, etc. Each department develops their respective SOPs, checked by senior designee, approved by Head of Departments / QA after review.

E.5.1.4 Storage of document and responsibility

- QA Department maintains all Master documents with in their document cell. At the time of revision by change control system, previous version of master copy should obsolete or cancelled, control copy should withdraw from distribution according to list and destroyed after effective of new version; Obsolete/Cancelled Master Copy should maintained in archive by QA.
- Batch Records, Equipment Logbooks and other Records, maintained on Shop Floor, and those are preserved in archive cell in QA after completion of document as define period in SOP.
- Specification are maintained and updated by QA department

- The master documents and all instructions are reviewed and approved by the QA department before use. Any changes to be made in the master documents and master procedures have to be justified and approved by QA Department. A Change Control Procedure is followed as per SOP no. SQA0002.

E.5.1.5 Distribution of Documents and responsibility:

- All the approved Master Documents are kept with Quality Assurance Dept. Issuance and withdrawal of SOPs is controlled by the Quality Assurance Department. Controlled copy distributed to all department which were requested.
- All Department sends a written/ERP request for issuing of document to Quality Assurance department. QA department issues a photocopy / printout or scanned copy of approved document to the all department.
- After the completion of process, the document is submitted to the QA department for review. The finished product samples are analysed by QC department as per specifications before the final release of the batch for distribution.
- All related document distributed through QA document area and its control maintain as per SOP no. SQA0003 "DOCUMENT CONTROL.
- If other party required some document, send uncontrolled copy either stamped or watermark of document.
- **Responsibility:** Each department has its own specific activities along with, role/responsibilities of personnel, different relevant SOPs, different formats, etc. Each department develops their respective SOPs, checked by seniors, approved by Head of Departments / QA and approved by and Q.A. after review for compliance.

E.5.2 Other Documentation related to Product Quality:

Following documents are maintained at site,

- **Training Procedures:** The trainer is drawn from the respective area of work from the line of managers and the senior members from QA/Production along with side experts (if required) the training program also includes practical training on working site. Following training aids are used for effective training.

✓ Reading materials-books and notes.
✓ Transparencies/slides with aid of projectors.

- **Document Control of Process Deviation:** Any change in process are reviewed and approved by the QA department. Any changes to be made in the Master Procedures have to be justified and approved by QA Department. A Change Control Procedure is followed for any change in manufacturing procedures/practices, change in vendors, equipment etc. and is implemented after approval by the Quality Assurance Department.

- **Calibration and Test Documents:** All measuring instruments and gauges like pressure, temperature, vacuum gauges, temperature indicators, temperature controllers, recorders etc. are calibrated against reference standard periodically and record is maintained regularly by instrumentation department. All calibration and test documents are maintained by Q.A.

- **Validation Documents:** All major equipment's are qualified as per the written installation, operational and performance (wherever applicable) qualification protocols before taking them in actual operation, test data sheets are filled. Equipment's are re-qualified after major repair, change in functions or shifted to other location. All validation documents are maintained by Q.A.

- **Reconciliation of Materials:** After completion of the batch reconciliation shall be done and record shall be maintained.

E.6.0 PRODUCTION:

E.6.1 Description of Production Operation:(Using flow sheets and charts, specifying important parameters)

The head of production is professionally qualified and has experience of techniques and operations of production. He takes every measure to prevent and avoid errors by means of continuous check of the process. As the batch manufacturing progresses the related batch manufacturing records are filled online and completed at every stage as and when the process is completed. The batch manufacturing is carried out in strictly according to master formula card.

The packing activity of new batch starts after the clearance of the packaging line. Reconciliation is done at critical steps of manufacturing and completion of packaging operations. Process flow sheets of Raw Materials/Packing Materials, Tablets, Capsules, Syrup & Ointment & Creams indicating the function of the department is as per **Annexure-XVIII, XIX.**

E.6.2 Brief Description of the General Policy for Validation:

The Validation Master Plan is written to serve as a guide, in achieving the overall objective of providing products, which consistently meet their predetermined quality attributes and help us to achieve the reliability of customers. The Validation Master Plan also provides direction and control during the execution of the Validation Project.

The Validation Master Plan is a written document that describes the company's intentions and validation need through the proper description of the facility, equipment, services, materials, analytical methods and processes. The Validation Master Plan describes the approach of validation, responsibilities, general guidelines for validation, stepwise validation activities and frequency of revalidation.

The document states the elements of the Validation Program. It encompasses aspects of the project, including installation, operation and performance qualification of equipment as well as Process Validation and cleaning validation.
It defines the responsibilities of the various functional groups in performance of validation and presents a validation schedule.
Equipment, processes & procedures undergo periodic critical revalidation to ensure that they are capable of achieving intended results.

- Process validation involves a series of activities taking place over the lifecycle of the product and process.

Process validation is defined as the collection and evaluation of data, from the process design stage through commercial production, which establishes scientific evidence that a process is capable of consistently delivering quality product. Process validation involves a series of activities taking place over the lifecycle of the product and process. Process validation activities in three stages.

• Stage 1 – Process Design:

The commercial manufacturing process is defined during this stage based on knowledge gained through development and scale-up activities.

• Stage 2 – Process Qualification:

During this stage, the process design is evaluated to determine if the process is capable of reproducible commercial manufacturing.

• Stage 3 – Continued Process Verification:

Ongoing assurance is gained during routine production that the process remains in a state of control.

This guidance describes activities typical of each stage, but in practice, some activities might occur in multiple stages.

Before any batch from the process is commercially distributed for use by consumers, a manufacturer should have gained a high degree of assurance in the performance of the manufacturing process such that it will consistently produce drug products meeting those attributes relating to identity, strength, quality, purity, and potency. The assurance should be obtained from objective information and data from laboratory-, pilot-, and/or commercial scale studies. Information and data should demonstrate that the commercial manufacturing process is capable of consistently producing acceptable quality products within commercial manufacturing conditions.

A successful validation program depends upon information and knowledge from product and process development. This knowledge and understanding is the basis for establishing an approach to control of the manufacturing process that results in products with the desired quality attributes. Manufacturers should:

• Understand the sources of variation

• Detect the presence and degree of variation

• Understand the impact of variation on the process and ultimately on product attributes

• Control the variation in a manner commensurate with the risk it represents to the process and product

Ongoing programs to collect and analyze product and process data to evaluate the state of control of the process. It may identify process or product problems or opportunities for process improvements that can be evaluated and implemented through some of the activities described in Stages 1 and 2.

Manufacturers of legacy products can take advantage of the knowledge gained from the original process development and qualification work as well as manufacturing experience to continually improve their processes. Implementation of the recommendations in this guidance for legacy products and processes would likely begin with the activities described in Stage 3.

Also have the in process check point, quality review trend, QRSC meeting and trend so process should be continued verification stage and control.

Type of process validation

- **Prospective process validation:**
  Prospective process validation shall be carried out before routine production of products intended for sale and after new master formula and the manufacturing process have been established, as demonstrated by process optimization batches.

- **Concurrent process validation:**
- Validation carried out during consecutive routine production of products intended for sale.
- Concurrent Validation shall be carried out for establishing documented evidence that a facility and process do what they purport to do, based on information generated during actual imputation of the process, concurrent validation can be conducted.

- Data from replicate production runs are unavailable because only a limited number of batches have been produced.
- Batches are produced routinely.
- Batches are produced by a validated process that has been modified. Prior to the completion of concurrent validation, batches can be released for commercial distribution based on thorough monitoring and testing of the batches.
- Concurrent validation to be performed on three consecutive production batches.

- **Retrospective process validation:**
- Validation of a process for a product which has been marketed based upon accumulated manufacturing testing and control batch data.
- Retrospective validation is historical trending of results of testing and evaluation on established products to demonstrate that:
  - Critical quality attributes and critical process parameters are still valid as they give consistency in results.
  - In process controls are appropriate for the given product.
  - Majority of the batches meeting the processing steps, equipment's, processing, timing, manufacturing environment and the operators are demonstrating consistency to specifications.
- An exception can be made for retrospective validation for well-established processes that have been used without significant changes to finished product quality due to change in material, equipment, system, facilities or the production process.

Based on historical concept current expectation is that no longer make use of this approach as their sole evidence of validation and should be moving towards CPV.

- **Re-Validation:**
- Revalidation is done to evaluate the impact of changes in process, procedure, equipment, raw material and primary packing material, environment.
- The re-validation process is intended to ensure that validated systems continue to perform in accordance with the parameters defined during the original validation.
- All systems subject to validation should be revalidated within a pre-specified period of time. The re-validation frequency will be determined upon completion of the initial validation of a system.
- Re-validation frequency requirement shall be evaluated based on impact analysis study carried out during Change control procedure.
- Revalidation is of two types:

A) Revalidation after changes to evaluate impact on product quality.

B) Revalidation after change is done in the following circumstances:

- Major changes in processing steps e.g. change in input material.
- Major change in equipment size, design, and its material of fabrication.
- Major change in area and support system.
- Major change in Quality Control Analytical Methods.
- Major change in Computer – Software and Hardware.
- Periodic Re-validation at scheduled intervals.

- Periodic Re-validation is done to evaluate consistency in operations, equipment wears and tear, processing steps,
- In-process standards and overall product quality.

Note: The extent and frequency of re-validation will depend on the nature and significance of the changes.

- **Release for Sale or Supply of Development and Validation Batches:**
  The batches on which concurrent validation is done is release for sale after getting reports from quality control and approval from quality assurance department.

E.6.3 Material Handling During the Manufacturing Process:

E.6.3.1 Control of Raw Material:

Each consignment of material received is examined visually. Damaged goods are labeled as "ON HOLD" and kept aside for Quality Assurance's instructions either for disposal or return to party. After verification of quantity received and batch wise segregation, the details of receipts are entered in a register called inward register and the Goods Receipt Note (GRN) is generated with unique serial number. All the containers are placed in designated area labeled as quarantine.

All the containers are placed in designated area labeled as "UNDER TEST", with details of GRN. Samples are drawn as per sampling plan and sampled containers are identified with "SAMPLED" sticker and tested as per the respective material specifications by Quality Control Department. 100% containers are sampled for identification and composite samples are taken for complete analysis for active raw material and random ($\sqrt{N}+1$) samples taken for inactive materials.

Analyst compiles the data after analysis & decides whether the material meets the specifications or not. Accordingly, QC Approves or Rejects the material.

"APPROVED or REJECTED" labels are affixed on the material containers & the same is transferred to designated storage area APPROVED or REJECTED material accordingly.

E.6.3.2 Control of printed Packing Material:

All packaging materials are handled as per above procedure and approved / rejected status labels are affixed accordingly. Printed packaging materials are stored securely under lock and key and re-issued in requisite number only.

Dispensing of material is done as per SOP on FIFO/FEFO principle. Appropriate material handling devices are used such as trolleys, cages and other suitable containers.

The quality assurance personnel along with production personnel assures the calibration of equipment's and instruments such as balances, hygrometers etc. which are used in daily dispensing activity.

All packaging materials are labeled in such a manner that the material is easily identified that the material is the one, which is currently in use.

E.6.3.3 Quarantine and Release of Finished Product:

After the completion product packing operation, finished goods are transferred to in-house quarantine area. On completion of complete testing and the batch records are sent to QA for review. On satisfactory compliance, the QA department shall release the batch for further distribution.

NOTE: Clearance for intermediate products for next stage of processing is done only after release of the material from Q.C. Line clearance and in-process checks are carried out as per written standard operating procedures.

E.6.3.4 Arrangement for Handling Rejected Materials and Products:

All rejected materials are separated from 'APPROVED' or 'QUARANTINE' area and the quality control persons will affix 'REJECTED' labels. The rejected material is transferred to a secured "Rejection" area. Quality assurance decides the fate of such rejected material as to destroy or to return. No printed packaging materials are returned but are destroyed on the premises under supervision of quality assurance. The rejected materials are kept under lock and key and only authorized persons are allowed to handle such materials according to SOP.

E.7.0 QUALITY CONTROL:

Description of the QC activities carried out on the site in terms of physical, chemical and microbiological and biological testing

- Quality Control Department is responsible for approving or rejecting all the inputs such as raw materials, packing materials, cleaning validation samples, process validation sample, etc. and outgoing finished products manufactured, processed, packed or held by the company.
- The company follows the specifications and test methods as per USP/BP/IP/In house for the raw material and finished products.
- The company also has additional in-house laid down specifications for testing of raw materials and the finished product that are stringent than the Pharmacopoeia limits for better control on quality of our products.
- The quality control system is an integral part of cGMP, cGLP and ensures that the necessary and relevant tests are done & that neither material nor products are released for use or supply, until their quality has been judged to be satisfactory.

E.8.0 DISTRIBUTION, COMPLAINTS, PRODUCT DEFECTS AND PRODUCT RECALLS:

E.8.1 Distribution:

- Released finished goods are stored on pellets or racks in fully secured finished goods store.
- It is ensured that the finished packs are kept separately, product wise and batch number wise up to specified height.
- Dispatch of Finish product follow up First Expire First Out (FEFO) system.
- There is an effective labelling system to identify the status of products.
- Finished goods store is segregated into three areas such as Quarantine store with storage condition NMT 27°C, Finished goods store with storage conditions NMT 27°C.
- The distribution records of domestic products are maintained in such a way that traceability of the product which are distributed can be ensured fast, in case of withdrawal or recall.

E.8.2 Brief description of the system to ensure appropriate environmental conditions during transits e.g. temperature monitoring / control

The Finished products are transferred through closed vehicle to Go down or Warehouse and unload the finished product in a prescribed manner.

E.8.3 Complaints, Product Defects and Product Recalls:

E.8.3.1 Brief Description of the system for Handling Complaints, Product Defects and Recalls

- We have written procedure for market complaints handling **(as per SOP NO. SQA075)** which defines responsibility for logging and investigating of market complaints. Head-quality Assurance with the Production Head is responsible for investigating complaints as per written procedure.

- Details of complaint, investigation report, Action plan and reply to the complainant constitutes through complaint handling procedure.

E.8.3.2 Retention Period of Market Complaints: The record remains with Q.A. Records on complaints should be maintained until at least one year after the expiry date or One year after the date that the complaint was received, whichever is longer.

E.8.3.3 Product Defects & Product Recall

- Written procedure for product defects & product recalls are in place (**as per SOP no. SQA043**). Head - Quality Assurance is responsible for investigation of product defects & product recall; whether it is on the instructions from drug authorities (FDA) or it is a voluntary withdrawal. Details in approved format are filled.
- FDA is informed about stock manufactured, distribution details and quantity recalled.
- After recalling a batch is kept at secured dedicated area till the decision about its disposal is taken.
- If recall of a product is at the instance of local drug authorities, the final disposal is done in their presence, but if it is another withdrawal, decision of Head-QA and Managing Director is final.

E.9.0 SELF-INSPECTION:

- Self-Inspection Program (Internal Audits) is conducted by cross-functional team, which is headed by QA Department. The audits are conducted as per the Audit Planner, which includes routine inspection of the facility or inspection of some part of the function or follow up inspection after external audit. The frequency of self-audit is once in 6 months. This frequency can be increased for any department, depending upon the number / seriousness of deviations, failure, complaints etc. **as per SOP no. SQA040**

- After inspection, QA Head discusses the identified deficiencies / non-conformities, with the Head of concerned department, for corrective and preventive action.

- After discussion, the audit report is prepared and forwarded to the Head of Department. If required, copy is marked to management.

- Follow up inspection, if required, is planned to ensure compliance.

E.10.0 CHANGE HISTORY

Sr. No.	Current document No.	Revised document No.	Ref. CRF No.	Reason for revision
1.	S/SMF-00	NA	NA	New Document
2.	S/SMF-01	S/SMF-00	NA	Editorial change
3.	S/SMF-02	S/SMF-01	NA	Incorporated the various annexure for reference.
4.	S/SMF-03	S/SMF-02	NA	Reg. office address is updated.
5.	S/SMF-04	S/SMF-03	SQAC19005	Remove the plot no. 20 from address of facility
6.	S/SMF-05	S/SMF-04	SQAC21004	SMF in line with guideline "WHO Technical Report Series, No.961, EU Volume-4, Part-III (SMF).
7.	S/SMF-06	S/SMF-05	SQAC22001	• Expansion of facility. • Point no. E.1.3.2 "Site and Building Description:" is revised. • All annexure is revised . • Point no.E.6.2 "Validation Updated with current approach".

E.11.0 ABBREVIATION

AMC	:	Annual maintenance contract	DQ	:	Design qualification
QA	:	Quality assurance	IQ	:	Installation qualification
QC	:	Quality control	OQ	:	Operational qualification
SMF	:	Site master file	PQ	:	Performance qualification
HVAC	:	Heat ventilation air conditioning	IP	:	Indian pharmacopoeia
FEI	:	FDA establishment identifier	BP	:	British pharmacopoeia
HEPA	:	High efficiency particulate air	USP	:	United states pharmacopoeia
EDI	:	Electro Deionization Unit.	GPCB	:	Gujarat pollution control board
NMT	:	Not more than	RCC	:	Reinforced Concrete Cement
BMR	:	Batch manufacturing record	WHO	:	World health organization
Cgmp	:	Current Good manufacturing practice	AHU	:	Air handling unit
GRN	:	Goods receipt note	RH	:	Relative humidity
Cfu	:	Colony forming unit	CIN	:	Corporate identification number
RO	:	Reverse osmosis	DUNS	:	Data universal numbering system
UGWST	:	Under ground water storage tank			

Reference: WHO Technical Report Series, No.961, EU Volume 4 Part-III, ICH-Q7 CHAPTER 12 AND 19.6.

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