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Prequalification Unit Inspection Services
WHO INSPECTION REPORT
Finished Product Manufacturer

Part 1	**General information**
Manufacturers details	
Name of manufacturer	IPCA Laboratories Limited, Ratlam
Corporate address of manufacturer	48, Kandivli Industrial Estate, Kandivli (West), Mumbai - 400067 Maharashtra, India
Inspected site	
Name & address of inspected manufacturing site if different from that given above	IPCA Laboratories Limited, Ratlam, P.O. Sejavta Dist., Ratlam – 457001, Madhya Pradesh, India Latitude N 23°23.358‘, Longitude E 75°03.407‘
Unit / block / workshop number	– Building Pharma I, 2nd floor (IBD – VIII for sterile Artesunate API) – Building Pharma III, Ground floor (Vial line for Artesunate powder for injection – Building Pharma III, 2nd floor (Ampoule line for Sodium Bicarbonate Injection 5% w/v powder solvent for injection and Sodium Chloride Injection 0.9% w/v powder solvent for injection)
Inspection details	
Dates of inspection	29 September – 4 October 2025
Type of inspection	Routine GMP inspection
Introduction	
Brief description of the manufacturing activities	Ipca’s Ratlam manufacturing site produces active pharmaceuticals, sterile active pharmaceutical ingredients, and finished pharmaceutical products (oral and injectable dosage forms) for domestic and international markets.
General information about the company and site	IPCA Laboratories Limited was established in 1949. The total number of employees is approximately 15,000, and the number of products marketed worldwide is approximately 120. In India, it has manufacturing facilities at Kandla, Indore, Pithampur, Athal, Piparia, Dehradun, Sikkim, and Ratlam. Licensed to manufacture liquid and dry powder parenteral (aseptically prepared and terminally sterilized ampoules and vials), Sterile API (Sterile Artesunate) Oral Solid Dosage forms, Liquid Oral dosage forms, and Dry Suspensions. Products manufactured at the Ratlam site comprise only Generic & Proprietary Medicines for Human Use.
History	This was the 5th WHO PQ inspection of the site.

Brief report of inspection activities undertaken – Scope and limitations	
Areas inspected	– The following areas were inspected: – Pharmaceutical quality system – Personnel and training – Documentation – Hygiene and sanitization – Process and computerized system validation – Equipment and materials – Production and packaging – Quality control, including the microbiology laboratory – Utilities
Restrictions	None
Out of scope	Products and facilities (e.g., API manufacturing, Solid, semi-solid and liquid dosage forms, ampoules other than the Artesunate solvents) not related to the WHO Prequalification).
WHO product numbers covered by the inspection	– MA135: Sterile Artesunate Powder for injection 60mg – MA186: Sterile Artesunate Powder for injection 120mg – 5 % w/v Sodium Bicarbonate solution ampoule for Artesunate injection (in combi pack) – 0.9 % Sodium Chloride solution ampoule for Artesunate injection (in combi pack) – Artesunate Sterile, micronized (APIMF 240)
Abbreviations	**Meaning**
AHU	Air handling unit
ALCOA	Attributable, legible, contemporaneous, original and accurate
API	Active pharmaceutical ingredient
APR	Annual product review
APS	Aseptic process simulation
BMR	Batch manufacturing record
BPR	Batch production record
CC	Change control
CFU	Colony-forming unit
CIP	Cleaning in place
CoA	Certificate of analysis
CpK	Process capability
DIRA	Data Integrity risk assessment
DQ	Design qualification
EDI	Electronic deionization
EM	Environmental monitoring
FMEA	Failure modes and effects analysis
FPP	Finished pharmaceutical product
FTA	Fault tree analysis
GMP	Good manufacturing practices
GPT	Growth promotion test
HEPA	High efficiency particulate air

HPLC	High performance liquid chromatograph
HVAC	Heating, ventilation and air conditioning
IQ	Installation qualification
LAF	Laminar air flow
LIMS	Laboratory information management system
MB	Microbiology
MBL	Microbiology laboratory
MF	Master formulae
MFT	Media fill Test
MR	Management review
NC	Non conformity
NCA	National control authority
NCL	National control laboratory
NRA	National regulatory agency
OQ	Operational qualification
PHA	Process hazard analysis
PLC	Programmable logic controller
PM	Preventive maintenance
PQ	Performance qualification
PQR	Product quality review
PQS	Pharmaceutical quality system
PW	Purified water
QA	Quality assurance
QC	Quality control
QCL	Quality control laboratory
QMS	Quality management system
QRM	Quality risk management
RA	Risk assessment
RCA	Root cause analysis
RO	Reverse osmosis
SIP	Sterilization in place
SMF	Site master file
SOP	Standard operating procedure
URS	User requirements specifications
UV	Ultraviolet-visible spectrophotometer
WFI	Water for injection

Part 2	**Summary of the findings and comments**

1. Pharmaceutical quality system

Quality Management System

The quality management system was established to cover the main GMP areas and was supported by QMS software.

- TrackWise: deviations, change control, OOS/OOT, quality complaint

- Laboratory Information Management system (LIMS): FG, RM, PM sample and electronic test data management
- Supply Chain Management: Material management, labeling, batch release, retention samples, stability samples
- Electronic Document Management: batch production and packaging records, SOPs, PQRs, other documents
- Learning Management System (eLMS): training management.

The implementation of the above e-Systems was mostly completed. From the total number of e-logbooks to be implemented, 81 were already completed and 26 are still pending (e.g., entry and exit log of the aseptic area, area cleaning and sanitization, etc.).

The procedures that were reviewed and discussed during the inspection generally met the GMP. Product and processes were monitored according to documented schedules and procedures. The results were considered during the batch release.

Quality Manual
The Quality Manual was discussed.

Management Review
Management Review was performed according to written SOP, in reference to the ICH Q10 guideline. Management Quality Review Meetings (MQRM) were held quarterly under the leadership of the President of Corporate Quality. The agenda contained a standardized set of quality metrics that were submitted by the sites prior to the meeting. Minutes of the meeting were published by Corporate. The presentation included the following main items.

- Audits
- Customer Feedback - Complaints, returns & recalls
- Product Quality Performance - OOS, OOT, Deviations, Laboratory investigations, Stability,
- batches released & rejected
- Supplier Qualification & Management - Starting and packaging material approvals & rejections, Vendor qualification
- Infrastructure & Resources – Facilities, Validation & Qualifications, Manpower, Training
- The metrics for OOS, OOT, Deviations, and change controls

Product Quality Review
Product quality reviews were prepared as per SOP, which included all of the items listed WHO TRS. The annual schedule for the year 2025 was available.
The APRQs for the products within the inspection scope were prepared as planned, according to the product codes.

Change Control
The SOP for handling change control in TrackWise was discussed. The SOP was applicable for the handling of changes across the corporate level, including formulation and API sites. The procedure was supported with a process flow diagram. The change controls were tracked every day, and an automatic email reminder was sent to the originator, supervisor, and manager on the due activities. The trend analysis was carried out quarterly and annually. The changes were supposed to be closed within

90 days. The latest version of the SOP was revised for better clarity, for the process flowchart update and to include extension initiation. There were 1,543 changes recorded between 2022 and 2025. Risk based selected cases were discussed.

Quality risk management

The risk assessment was performed for the entire manufacturing process, from raw materials through final packing.

The QRM used the FMECA quality tool. The QRM and investigation registered for years 2023, 2024 and 2025 with risk-based selected studies were discussed.

Data integrity, DIRA

The DIRA was managed according to the corporate SOP.

The DIRA protocol with the report for computerized & manual data systems for equipment /instruments was discussed. The number if identified risks at the different units was available.

Risk-based selected investigations were discussed.

Vendor Qualification

The vendors were qualified at the corporate QA level. The list of approved vendors was available to the warehouse staff in the SCM software and as a hard copy. The approval of the PM (packaging material) vendors was part of the management review.

Handling of deviations

Deviations were handled in the TrackWise Version: 10.8.0 software according to SOP. The cases were classified as minor or major. All deviations shall be closed within 30 days from the opening, with the option of 2 extensions with proper justification and impact assessment. The list of deviations recorded between 2022 and 2025 related to Production, QC, and QA with a risk-based selected case were discussed.

CAPA management

CAPAs were managed in Track Wise software. The CAPA list since the last WHO inspection, with 3 CAPA case records were discussed.

Batch Release

The products were released according to SOP for Batch Record Review and Release. The batch release was supported with checklists. The act of release was documented in the SCM system by electronic signature. 7 persons were listed as authorized for batch release. The review of the batch documentation of the ampoules and Vials by the IPQA was the prerequisite of the final batch release.

The raw and packaging materials were also released by QA based on test results, test records, and QC supervisor reviews. The release was recorded in the release checklist. 3 persons were authorized to release RMs/PMs.

Antimicrobial resistance (AMR)

AMR QRM was prepared to assess the potential of AMR at the site. The study concluded that the risk was under control and all measures were taken to prevent antimicrobial resistance.

2. Good manufacturing practices for pharmaceutical products

General GMP compliance

There were written instructions in place and followed for the GMP related activities, and particularly the production operations. Manufacturing processes were defined and documented in BMRs and BPRs. The required resources were available, including adequate premises, equipment, and utilities, and qualified personnel. Process validation and equipment qualification programs were in place.

Contamination Control Strategy (CCS)

The basic principles of the CCS were summarized in the corporate SOP on Contamination Control Strategy. The main elements of the CCS were implemented in line with the policy document and protocols. The documents related to the CCS were discussed.

3. Sanitation and hygiene

There were written procedures in place on the cleaning and sanitization of the facilities and the hygiene rules of the staff (for more details, see the relevant sections).

Access to the controlled areas was restricted to personnel via biometric identification. Only qualified personnel were allowed to enter the area and participate in any aseptic process. The qualification consisted of an initial and regular (annual) requalification and routine personnel microbiology monitoring.

The list of authorised persons was available. The disqualification criteria were defined as: failed microbiology monitoring or being out of aseptic activities for more than 6 months. The qualification records of an operator were discussed, including initial qualification and the last media fill participation.

4. Qualification and validation

Manufacturing process validation

The main principles of the process validation and the equipment qualification were summarized in the Validation Master Plan and the corporate SOP. The validation records of the inspected products were discussed.

Computerized Systems

The SOP on computerized systems and master list was discussed. The SOP provided definitions of computerized systems, including manufacturing equipment; however, manufacturing equipment was not included in the checklist. The TrackWise user management, including SOP was discussed. The used groups and user privileges were properly defined.

Veritas NetBackup Procedure detailed the types of storage medium for data backup (EMC DATA DOMAIN-MSDP storage -VERITAS flex) and the backup frequency (daily /weekly /monthly /yearly).

Computer system validation was managed by the Corporate in accordance with SOP. Three software categories were defined: 36 months validity for low risk (category 1-5), 24 months for medium risk (cat 4,5), and 18 months for high risk (cat 4,5).

The main software available on-site were categorized.

Computer system validation records for TrackWise were discussed.

5. Complaints

The investigation of product complaints was managed in TrackWise. The complaints were received at the corporate office and forwarded to the respective sites for follow-up. The CQA will enter the details of the complaints into TrackWise. The complaints were classified as critical (major) and non-critical (minor). The timelines were specified for acknowledgement, investigation and closure of the complaints. The investigation was conducted using risk assessment tools (FMEA, FTA, and fishbone diagrams). The complaints were trended quarterly and annually. Risk-based selected cases were discussed.

6. Product recalls

The procedure on product recall (Export market) was discussed. The recalls were classified as Class I to IV (as per MHRA recommendation), similarly, recalls had three levels (customer, wholesale, and retail level).

- Class 1: the defect is life-threatening, to be completed within 24 to 72 hours.
- Class 2: the defect may cause mistreatment or harm to the patient, and should be investigated within 24 hours to 10 days.
- Class 3: the defect is unlikely to cause harm, that should be investigated within 5 days to 30 days.
- Class 4: caution in use.

The recent SOP was modified since the last inspection to add more details to the procedure, e.g. mock recall scenarios (out of office hours and raw material subject to recall) and the verification frequency.
The following mock recall documents were discussed: protocol for export products, and Mock recall report for export products.

7. Contract production, analysis and other activities

No production was contracted out. The site expanded its finished product warehousing capacity to two central warehouses in Indore. Before starting to use the warehouses, change control investigations were initiated.
Two contract laboratories were used for QC testing (particle size distribution and microbiology) of the products within the scope of the inspection. The laboratories were qualified, listed on the approved laboratories list, and had a valid technical agreement.

8. Self-inspection, quality audits and suppliers' audits and approval

The self-inspections were held according to SOP. The SOP included the list of area-specific templates and defined the criteria for the qualification of auditors.
The 2025 annual schedule and execution details were up to date and discussed. The departments were to be audited twice a year.

9. Personnel

The site organogram was up to date. The number of staff was approximately 580. The manufacturing operations were organized in 3 shifts, 6 days a week, with Sunday off. Manufacturing was planned for Sunday only in exceptional cases.

The staff involved in the GMP activities had written job descriptions. The job descriptions of the following staff members were discussed.

- QC Head (Assistant general manager)
- Unit Head
- Quality assurance manager
- Production manager
- Engineering manager
- Sterile API assistant manager

The material flow and the gowning procedure in the controlled areas were described in written procedures.

10. Training

The training was managed via the Training Management System SOP. Apart from the general GMP training, internal and external training were held depending on the topic and the demand. The internal trainers were qualified. The training records of a training held in March 2025 were discussed. The main topics covered: handling of deviation quality policy, good documentation practice, quality manual at the site, and training management. The trainings were recorded in forms. Employees who were required to be involved in aseptic area operations (Grade C, B, A) were given special training.

11. Personal hygiene

The general hygiene rules were available in English and Hindi, including the cleanliness and health state for operators in the manufacturing area. Shower, leg, and hand wash and sanitization facilities were available for the staff when entering the production areas. Any drink, food, cosmetics in the manufacturing facility, and smoking were strictly prohibited. The personnel gowning procedure was appropriate and followed. Instructions and pictorials were sufficiently clear. Operators working in the aseptic filling area were qualified periodically. There was a written SOP in place for the personnel behavior inside the aseptic area.

The gowning and training evaluation report for a microbiology analyst related to the sterility testing area was discussed.

All personnel were required to undergo an initial health examination prior to employment. Thereafter, regular health examinations were conducted annually. Personnel conducting visual inspections were required to undergo periodic eye examinations every 6 months, according to SOP. The list of qualified personnel for visual inspection and the list of qualified personnel for the aseptic area were reviewed.

12. Premises

General

The inspection scope was restricted to Buildings I and III.

The material and personnel flow, room classification, and AHU and pressure cascade layouts of the facilities were up to date and discussed.

The classification of the production cubicles was in line with the guideline, e.g., "Class B/A" for aseptic operations, "Class C" or "Class D" for the supporting activities or background. The condition and classification of the changerooms were appropriate for the facility it was leading. Storage areas for warehousing raw materials and finished products were of sufficient capacity.

The facilities were cleaned and disinfected according to written procedures. Access to the facilities was controlled by biometric identification. The environmental conditions of the controlled facilities were recorded in logbooks manually, 2 times/shift. No continuous monitoring or alarm system was in place.

Approved and validated cleaning agents were used to clean and disinfect the controlled facilities. Written procedures were in place for the preparation and usage of the cleaning agents, which were rotated weekly.

There were 4 types of cleaning procedures used: Type A for daily cleaning, Type B for no-batch production cleaning, Type C for Weekly cleaning, and Type D for monthly cleaning.
The disinfectants used in the aseptic area were sterile filtered and tested for sterility according to the annual schedules covering the vial, ampoule, sterile API production lines, and the microbiology laboratory.

The controlled areas were fumigated regularly (aseptic areas daily, the other controlled areas weekly) as defined in the corresponding SOPs.

The smoke test of the aseptic area was due every 2nd year according to SOP. The smoke test was performed by an external service provider using the Minicolt 4S Portable Smoke System and a generator.

Water system
The water system has not changed since the last inspection. The system was continuously monitored according to the sampling Schedule for Microbiological & Chemical Analysis of Water". Daily sampling schedule of water for microbiological analysis, included all the PW user points. Raw water was tested monthly for microbiology. In the WFI distribution loop, all the user points (except the return loop) were tested daily. Pure steam was tested monthly. The recent trend analysis reports of the PW and WFI were discussed. The water systems were regularly sanitized according to SOP. A paper-based logbook was used for the purified water storage & distribution sanitization record.

HVAC system
The SOP on Performance Qualification/Periodic Verification of HVAC Systems and equipment with HEPA filters was discussed with the following documents:

- Periodic verification protocol for HVAC system of vial line
- Periodic verification report for HVAC system vial line,
- Periodic verification protocol for HVAC system sterile API
- Periodic verification Report for HVAC system sterile API
- Environmental monitoring in the vial block

Compressed air and process nitrogen

The compressed air and nitrogen gas were analyzed as per established specifications defined in SOP.
Test for compressed air: appearance, odor, solubility, identification, carbon dioxide, carbon monoxide, sulfur dioxide, nitrogen oxide, oil mist, dew point, water, assay, oxygen, non-viables, viables.
Tests for nitrogen: appearance, solubility, identification, carbon dioxide, carbon monoxide, oil mist, dew point, water, assay, oxygen, non-viables, viables.
The qualification was done for all chemical tests once a year and for microbiological tests once every 6 months. The following documents were discussed. All the test results were accepted.

- Periodic verification protocol of nitrogen gas ampoule and vial line
- Periodic verification report of nitrogen gas ampoule and vial line
- Periodic verification protocol of compressed air ampoule and vial line
- Periodic verification report of compressed air ampoule and vial line

Electricity

There were 2 electricity generators operated: one for Pharma III and one for sterile API Pharma I. Maintenance was performed annually. The start of the system was automatic. There was no electricity breakdown for more than 5 years.

13. Equipment

The vial line was dedicated to the manufacturing of aseptically filled Artesunate dry powder and consisted of a conventional integrated aseptic filling line from vial washing to vial capping, which was then further integrated to “online” leak testing and semi-automated inspection, after which the vials were stored in a vial quarantine area before packaging. As per GMP requirements, the critical steps of vial filling, stoppering, and sealing/capping were performed in Grade A with a Grade B background. The filling machine was protected from personnel intrusion via solid barriers with glove ports (RABS) in a Class A area with a Class B background.

The Ampoule line for the Sodium Bicarbonate and Sodium Chloride Ampoules was multi-product. The line consisted of a conventional integrated aseptic filling line from ampoule washing through filling and sealing, followed by terminal sterilization in an autoclave. Even though the products were terminally sterilized, the line was operated under aseptic conditions.

The Sterile API Manufacturing Facility (IBD VIII) was a dedicated unit for the aseptic production of sterile artesunate API. The process included dissolving the non-sterile API in a stainless-steel reactor, followed by sterile filtration and combined crystallization and drying in an agitated filter dryer (ANFD). The micronizer was located in the same room. After micronization, the material was transferred to the packaging room under a Class A mobile LAF. The packaging size was 1kg in a sterile aluminium canister.

The validation master plan summarized the annual schedule of equipment qualification and calibration
The last qualification records of the Depyrogenation tunnel in the vial line (instrument ID 58954) were discussed.
The qualification protocol was based on the SOP Performance Qualification of the Depyrogenation Tunnel.

The parameters subject to qualification: airflow (every 6 months), differential pressure (every 6 months), filter integrity/leakage test (every 6 months), airflow pattern (every 6 months), non-viable particles (every 6 months), sensor calibration (annual), heat distribution empty and loaded (annual), conveyor speed (annual).
The last report was discussed.

Maintenance
Procedure to attend preventive maintenance breakdown of system, machine, equipment.
The program was managed by the LIMS Schedule Manager.
The protocol and the record of the preventive maintenance job were also recorded in the LIMS.
The last quarterly maintenance records of the depyrogenation tunnel (vial) in the LIMS and in the hard-copy logbook (checklist) were discussed.

Instrument calibration
Procedure for calibration of instrument, described the general principles of the instrument calibration program and the corresponding documentation in the LIMS system.
The last calibration records of the temperature sensor installed in the depyrogenation tunnel (vial) were discussed. The instrument was calibrated by an external calibration laboratory. The calibration was due annually.

Cleaning validation
The general principles of the cleaning validation were summarized in a corporate SOP. The last verification records for the ampoule line were based on a discontinued product.

14. Materials
Written procedures were in place for the receipt and handling of materials (RM/PM/FP).
- Receipt of raw materials.
- Dispensing of raw material.
- Warehousing of raw materials.

Raw materials were received based on a checklist (hard copy). All the information related to the incoming goods, the storage, status change (e.g., release), and movement (e.g., dispensing) was recorded in the SCM ERP system. The process steps contained within security inward preparation, barcode preparation, control weighing, goods inward memo (GIM), and the GIM number preparation, control/analytical number generation. The statuses of the materials during the warehousing can be as follows: Quarantine, Sampled/Under test, Approved, Rejected.
The storage, handling, and labelling of the materials were supported by an internal barcoding system.
The storage temperature was controlled and monitored (Temperature and RH recording.
The materials from the warehouse to the production facilities were transported in temperature-controlled vehicles (Transfer of dispensed raw materials to production.
According to the company policy, the raw materials were retested annually until the expiry date.
The handling of raw materials used for sterile artesunate was handled according to the above procedures, with the following exception: Receipt, storage, and dispensing of raw materials for the sterile API division.

The staff of the finished product warehouse was responsible for collecting the finished product in the packaging plants upon the "Product Transfer Slip" prepared by the Production and transferring it to the warehouse. The statuses of the FG in the SCM can be: "Under test", "Approved/Released", "Quarantine released", or "Rejected". The finished goods are transported to one of the IPCA Central Warehouses in Indore. The warehouses are considered part of the manufacturing site QA system. The warehouses were not inspected by the WHO PQT.
The "Quarantine released" status was used for goods transferred to the central warehouse upon urgent market demand while under quarantine, with special approval from QA. No actual release activity was supporting the status. (Procedure for transportation, receipt and warehousing of finished products, and Dispatch of Finished Products for Export).

The FG transporters were qualified, and the list of qualified transporters was available.

The warehousing records (SCM) of randomly selected materials were discussed.

Material movement in the controlled areas
Written procedures were in place describing the material movement in the controlled areas. The materials to the aseptic area were transferred through the autoclave, pass box, or sterile filtration. The corresponding SOPs were discussed.

15. Documentation
The Company had a three-tier hierarchy of documents:
- Corporate Policies
- Corporate "Mandated" SOPs – implemented on-site "as is"
- Site SOPs – Written and approved "on-site for the site" in accordance with Corporate Policies and GMP requirements.

The following corporate level SOPs were applicable for both the API and FPP production:
- Training management system
- Medical examination
- Quality policy
- Deviation management and investigation
- Corrective and preventive actions
- Quality Risk Management

Document Control was described in SOP on Retention of documents. The revision and archive dates of the different document types were defined. For example, for the BMRs: product shelf-life plus 1 year, APQR: 10 years, SMF: 3 years, VMP: 3 years, CAPA investigations: 06 years. The list of recently destroyed documents were discussed. A computerized "electronic document management system" (EDMS) has been implemented at the corporate level to control and distribute corporate policies and procedures to the Ratlam site.
The archive room (Room C) for archiving of paper-based documents was separated into 4 sections (CA-CB-CC-CD) and was used. The following data were recorded in the logbook for archiving. The registry contained the name of the document, the date of receipt, the personnel who delivered the document, the destruction date, and the responsible person who received the document.

16. Good practices in production

The inspectors made a facility tour covering all three product lines in the scope of the inspection.

The Batch manufacturing and batch packaging reports were managed in the EDMS system and printed upon request by production. Creation, Review, Approve and Revision of Documents (BMR, BPR, BPCR) in EDMS Application, and Management of Batch Records, Preparation of master manufacturing and packing records.
Batch numbers were generated in the SCM automatically, indicating the process code (2-3 digits), the year (2 digits), and a serial number (3 digits).
Batch Numbering, manufacturing, and Expiry Dates for Drug Products and Formulations, GMP/RTM/QA/085(F)/2023 v. 12. The effective batch manufacturing and batch packaging reports of the products in the scope of the inspections were dsicussed.

The EDMS lacked the functionality to print additional pages. Therefore, it is handled by copying the requested page from the master QA copy, and issuance is controlled in the traditional logbook.
The EDMS was introduced for the preparation of batch records in November 2022, and E-log books were introduced in March 2025. In between the management of batch records numbering assignment was followed through traditional logbooks. It comprised a numbering assignment for all dosage forms.

BMRs of products in the scope of the inspection were reviewed.

Aseptic process simulation

The aseptic process simulations were due every 6 months according to the VMP and the annual schedule in line with the SOP about Media fill. The SOP had 4 annexures on the technical details:

- Annexure I Proposed types of interventions
- Annexure II Intervention record
- Annexure III Media-filled Units Transfer details
- Annexure IV Test record of Incubated Media Fill Units

The aseptic processes were regularly challenged by media fill. The records for the most recent media-fill study of the ampoule line were discussed. The filled ampoules were observed by the microbiologists. The result was no growth, the study passed as summarized in the media file report.

Reprocess and rework

The reprocess and rework were excluded by the statement in the SMF, section 6.1. The rules for repacking and redressing were summarized in Repacking of finished goods.

17. Good practices in quality control

The Quality Control Laboratory served both the non-sterile and sterile formulation units on the Ratlam site and was well designed with separate sections for wet chemistry and instrumental analysis. The laboratory was equipped with modern equipment.

HPLC and GC chromatographs were networked using Waters Empower and Chromeleon chromatographic software. Reagents and standards were stored under the correct conditions and were adequately labelled for traceability and expiry. The tests were performed according to approved quality specifications and the test methods. The tests were recorded in electronic logbooks (LIMS).

The analytical test methods were developed in the Ratlam or Indore research and development laboratories, then transferred to the QC laboratory. There was no test method implemented or validated since the last WHO inspection in the scope of the inspection.

The samples received in the QC laboratory were managed by LIMS. The following documents and records were discussed:

- The test records of the products in the scope of the inspection
- The trend analysis of WFI (Pharma III)
- The calibration of UV spectrophotometer
- Daily housekeeping record for QC laboratory
- Preventive maintenance (PM) and calibration of HPLC
- Preventive maintenance (PM) and calibration of GC

Sampling

The raw material and packaging material sampling were performed in the sampling booths of the Pharma Store, according to the Sampling Procedure of Raw Material for Drug Product.
The classification of the sampling LAF was Class C with a Class CD background.

All the RM containers were sampled as part of the inspection. The sample amount was defined in the DCAD (Drug Compound Analytical Document).
The sampling tools were cleaned by the QC at the QC facilities (The Management, Allocation of Identification Number and Cleaning of Sampling Devices/Tools.
The sampling operations were recorded in the Sampling sheet, Sampling logbook and Sampling report.
The warehouse was responsible for cleaning the sampling booths under the supervision of QC, in accordance with the QC Cleaning Procedure for Dispensing and Sampling Tools.
The QA samples the finished products based on the Sampling Procedure of Intermediates, In-process and Finished Drug Products and the Sampling Plan for Injectables.
In the microbiology laboratory, the samples were managed according to SOP.

Microbiology laboratory

The microbiology laboratory was equipped with walk-in incubators, a double door autoclave (open in the Grade B environment), a colony counter manual (doer and checker system exists) and other equipment and instruments. A separate personnel airlock and pass-box were provided for culture handling under Biosafety Cabinet-2. Lyophilized bio-balls (ATCC) were used as reference strains. A separate personnel airlock and pass-box were provided for the sterility area under LAF. The LAF was requalified once every 6 months. A microbial limit test was performed for water and products using a separate personnel airlock and dynamic pass-box for materials.

COA for selected batches of products in the scope of the inspection were available and discussed.

The validation documents of selected test methods for products in the scope of the inspection were discussed.

The SOP, described the environmental monitoring program. The following records were discussed:

- Environmental monitoring trend analysis data (Microbiology laboratory, sterile testing area).
- Sterility test reports

Miscellaneous	
Samples taken	None
Assessment of the site master file	The Site master File was provided in advance of the inspection.
Annexes attached	None

Part 3	**Conclusion – Inspection outcome**

Based on the areas inspected, the people met and the documents reviewed, and considering the findings of the inspection, including the observations listed in the Inspection Report, a decision on the compliance of ***IPCA Laboratories Limited, Ratlam***, located at ***P.O. Sejavta Dist., Ratlam – 457001, Madhya Pradesh, India*** was considered to be operating at an acceptable level of compliance with WHO GMP Guidelines for FPPs.

All the non-compliances observed during the inspection that were listed in the full report were addressed by the manufacturer, to a satisfactory level, prior to the publication of the WHOPIR. This WHOPIR will remain valid for 3 years, provided that the outcome of any inspection conducted during this period is positive.

Part 4	**List of GMP Guidelines referenced in the inspection report**

1. WHO good manufacturing practices for pharmaceutical products: main principles. WHO Expert Committee on Specifications for Pharmaceutical Preparations. Forty-eighth Report Geneva, World Health Organization, 2014 (WHO Technical Report Series, No. 986), Annex 2. ***Short name: WHO TRS No. 986, Annex 2***
   https://www.who.int/publications/m/item/trs986-annex2

2. Good manufacturing practices: guidelines on validation. WHO Expert Committee on Specifications for Pharmaceutical Preparations. Fifty-third Report. Geneva, World Health Organization, 2019 (WHO Technical Report Series, No. 1019), Annex 3. ***Short name: WHO TRS 1019, Annex 3***
   https://www.who.int/publications/m/item/trs1019-annex3

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