STANDARD OPERATING PROCEDURE	
Department: Microbiology	**SOP No.:**
Title: Sampling of Sterile Raw Material	**Effective Date:**
Supersedes: Nil	**Review Date:**
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1.0 OBJECTIVE:

To lay down a procedure for Sampling of Sterile Raw Material.

2.0 SCOPE:

This SOP is applicable for Sampling of Sterile Raw Material.

3.0 RESPONSIBILITY:

Officer / Executive – QC

4.0 ACCOUNTABILITY:

Head – QC

5.0 PROCEDURE:

5.1 Warehouse Personnel shall intimate to Quality Control Department for sampling by providing **"Requisition for Analysis of Raw Material"**.

5.2 Receipt of GRN and filled format of Requisition for Analysis of Raw Materials from Store, QC Officer/ Executive shall enter the details of the GRN into Raw Material Inward register and enter Insp. Lot No. consider as Analytical Reference No. (A.R. No.) in **Annexure-I**, Titled **"Sterile Raw Material Sample Receipt / Analysis Record"** and arrange the sampling within 15 days. If sampling is not done within specified time, then intimate to QA.

5.3 EQUIPMENT / ACCESSORIES REQUIRED:

5.3.1 Reverse Laminar Airflow Unit.

5.3.2 Mobile Laminar Airflow Unit

5.3.3 Electronic Balance

5.3.4 Sampling Kit (Detail given in 5.4)

5.4 SAMPLE PREPARATION (SAMPLING KIT) :

5.4.1 Clean, dry, Sterilized & Depyrogenated Sampling rod, Spatula, Pipette etc.

5.4.2 Sterile Boiler suit Containing (Head Gears, Nose Mask, Bootees and Hand Gloves).

5.4.3 Clean, Dry, Sterilized & Depyrogenated Seal Cutter.

5.4.4 Sterile Sampling poly (Zip) bags.

5.4.5 Surgical Tape

5.4.6 Sterile aluminium tape

5.4.7 High GSM sterile Aluminium Wrapper

5.4.8 Sterilized & Depyrogenated vials for Sample Collection.

5.4.9 Sample for Analysis Labels as per **Annexure-III**, Titled **"Sample for Analysis"**.

5.4.10 Sample for Identification Labels as per **Annexure-IV**, Titled **"Sample for Identification test"**.

5.5 SAMPLING PLAN:

5.5.1 Plan for sampling for different type of materials as mentioned in table.

Type of Materials	No. of Unit to be Sampled
Active Materials	All
Excipients	$\sqrt{n} + 1$

Where n is the no. of units and sample wise divide by No. of containers. Sample qty. to be drawn from each container shall be calculated by dividing total required sample qty.

5.5.2 QC Personnel along with **"Requisition for Analysis of Raw Material"** GRN and sampling kit shall go for sampling in Store.

5.5.3 As per Sampling Plan, Select the number of containers to be sampled and get them arranged on the pallet.

5.5.4 Check and observe the containers physically for seal intactness and damage. Enter the detail of physical observation as per Format in a column mentioned for physically observation and shall be sign by QC and Warehouse person.

5.5.5 Check the containers for its labelled details with GRN for :

GRN No.,

Material Name,

Manufacturer Name,

Quantity,

Pharmacopoeial Grade,

Mfg. and Exp. Date.

5.5.6 SAMPLING:

5.5.6.1 Sampling of Consignment without Satellite Sample:

5.5.6.1.1 QC personnel shall enter to the Sampling Room /Aseptic area through the Change Room as per SOP Titled **"Entry and Exit in Aseptic Sampling Cum Dispensing Area"**.

5.5.6.1.2 QC Personnel shall Check and ensure the sampling area /Aseptic area and RLAF for its cleanliness.

5.5.6.1.3 Check for the pressure differential of the Booth and ensure the pressure differential for within its limit and enter the detail in its record.

5.5.6.1.4 Check for the balance calibration status and enter the detail in its record.

5.5.6.1.5 Ensure the area to be maintained for Temperature & RH, if not, inform to concerned person of warehouse & maintain its record.

5.5.6.1.6 All Sterile Raw Materials shall be sampled aseptically to avoid any kinds of contamination, cross contamination. Sampling of one batch at a time is permissible.

5.5.6.1.7 Switch "ON" for 30 minutes for UV light, blower and RLAF Sampling Booth, before start of activity.

5.5.6.1.8 During Sampling, UV light inside the RLAF shall be switch 'OFF' blower and tube light shall be kept switched "ON".

5.5.6.1.9 In Sampling, Only one container at a time shall be taken inside the Sampling Booth.

5.5.6.1.10 Open the container by breaking its seal under RLAF and provided with the help of suitable opening clean, sterilized & depyrogenated devices & observe for any abnormality in appearance in Raw material i.e. colour variation, black particle or any other foreign matter. In case of doubt inform to QC Manager.

5.5.6.1.11 With the help of clean and dried wrapped sterilized and depyrogenated sampling devices, collect the required qty. of sample from Top / Middle / Bottom of the layer of container in clean, sterilized & dehydrogenated vials under RLAF.

5.5.6.2 Sampling of Consignment with Satellite Sample:

5.5.6.2.1 It is a representative sample quantity received along with the consignment from the manufacturer which can be used as sample for analysis.

5.5.6.2.2 After receipt of Material Receipt Note from Raw Material store, check it for details and complete information. If MRN details are satisfactory, then assign Quality Control Analytical Reports No. to the raw material by entering all details in Raw Material Inward Record.

5.5.6.3 Sampling of Consignment during Production activities:

5.5.6.3.1 QC personnel shall enter to the Filling Room /Aseptic area through the Change Room as per **Entry and Exit** SOP **to respective area.**

5.5.6.3.2 QC Personnel shall Check and ensure the Filling Room /Aseptic area and LAF/Mobile LAF for its cleanliness.

5.5.6.3.3 Check for the pressure differential of the Area and ensure the pressure differential for within its limit and enter the detail in its record.

5.5.6.3.4 Check for the balance calibration status and enter the detail in its record.

5.5.6.3.5 Ensure the area to be maintained for Temperature & RH, if not, inform to concerned person of Production/QA & maintain its record.

5.5.6.3.6 All Sterile Raw Materials shall be sampled aseptically to avoid any kinds of contamination, cross contamination. Sampling of one batch at a time is permissible.

5.5.6.3.7 Switch "ON" for 30 minutes for UV light, blower and Mobile LAF in Respective area, before start of activity.

5.5.6.3.8 During Sampling, UV light inside the Mobile LAF shall be switch 'OFF' blower and tube light shall be kept switched "ON".

5.5.6.3.9 In Sampling, Only one container at a time shall be taken inside the Mobile LAF.

5.5.6.3.10 Open the container by breaking its seal under Mobile LAF and provided with the help of suitable opening clean, sterilized & depyrogenated devices & observe for any abnormality in appearance in Raw material i.e. colour variation, black particle or any other foreign matter. In case of doubt inform to QC Manager.

5.5.6.3.11 With the help of clean and dried wrapped sterilized and depyrogenated sampling devices, collect the required qty. of sample from Top / Middle / Bottom of the layer of container in clean, sterilized & depyrogenated vials under Mobile LAF.

5.6 SAMPLE QUANTITY:

5.6.1 **For Active:** Collect identification sample from individual container in separate vial, affix label for identification on each container and prepare a pooled sample for analysis and control sample.

5.6.2 Record the Sample Quantity Details in **"List of Raw Materials Quantity (For Sampling, Testing & Control Sample)"** as per Format in SOP.

5.7 **Withdraw the quantity of sample in suitable container as per below mentioned instruction :**

Unit No.	Test Required	Qty. of Sample to be Collected per Container	Individual / Pool	Replicate For Test	Retain Sample
1.	Sterility	2 x * TRQ /*** n	Pool	01	01
2.	Identification	** RQ per Container	Individual	01	00
3.	Chemical Analysis	3 x **RQ /***n	Pool	01	00
4.	BET	1 x **RQ / ***n	Pool	01	00
Total No. of sample replicates per consignment ⇒				04	01

Where,

* TRQ : Total required qty. including identification, chemical & instrumental Analysis, sterility and BET test.
**RQ : Required quantity for the said test.
***n : No. of containers to be sampled
For TRQ refer item wise Raw Materials and Required Sample Qty. Index.

5.8 After collection of sample from a container close the lid, seal it with sterile Aluminum tape, then Surgical tape and wrap it with high GSM sterile Aluminium Wrapper. Remove such closed container from area under RLAF to the surrounding area.

5.9 Affix **"UNDER TEST"** Sticker Label as per the **"Status Labeling"** in SOP on Quarantine Label and nearby affix **"SAMPLED"** Sticker Label as per the **"Status Labeling"** in SOP.

5.10 In case of Satellite Sample Received with Consignment Affix **"UNDER TEST"** Sticker Label as per the **"Status Labeling"** in SOP on Quarantine Label and nearby affix **"SAMPLED THROUGH SATELLITE SAMPLE"** Sticker Label as per the **Annexure-V.**

5.11 Repeat the same procedure for other containers and collect the sample from all the containers from which sampling is to be done.

5.12 After sampling, clean external surface of the entire container and sanitize it by wiping with disinfectant solution 70% IPA/5 % Virosil.

5.13 Transfers the closed container (after sampling) to the through pass box the under test Area.

5.14 Allow it to stand in the pass box under burning UV light for sterilization of its external surface.

5.15 After completion of sampling, switch "OFF" the Tube Light and Blower of Reverse Laminar Air Flow Unit/ Mobile LAF.

5.16 Clean the area inside RLAF with Sterilized mopper and sanitize it by wiping with disinfectant solution 70%.

5.17 Record the details of cleanliness in RLAF Record.

5.18 After 30 minutes, switch 'OFF' the UV light under RLAF.

5.19 Transfer the sampled containers to the Under Test Area.

5.20 Clean the Sampling Booth and record in the Sampling and Cleaning Record.

5.21 Enter the details in **Annexure-II**, Titled **"Sterile Raw Material Sampling Record"**.

5.22 QC personnel after sampling activity shall submit the sample to relevant department and sent retained / control sample to the Control Sample Room.

5.23 Used sampling tools shall be wrapped in polybag for cleaning, sanitization / De- pyrogenation & to be affixed with **"TO BE CLEANED"** Status Label.

5.24 RE –SAMPLING FOR RETEST MATERIAL:

5.24.1 Carry out the sample for retesting of a material after completion on or after the date of retest assigned on its Analytical Report, to reconfirm the purity of material.

5.24.2 Store officer shall intimate QC department on every first week of the month about the material whose validity period is about to complete in that month. All the containers / bags to be re-sampled shall be transferred from **"APPROVED"** area to **"UNDER TEST"** area and on its **"APPROVED"** label **"UNDER TEST"** shall be affixed.

5.24.3 Sample shall be taken for retesting from all the container / bag following the same procedure mentioned above, and retest A.R. No. generated automatically from software.

5.24.4 "SAMPLED" label as per the "Status Labeling" in **SOP** shall be affixed on the container with all the appropriate information.

5.24.5 After completion of the respective testing, the container shall be labeled with "APPROVED" or **"REJECTED"** on the **"UNDER TEST"** label as per the "Status Labeling" in **SOP** on the basis of its compliance or non compliance.

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6.0 REFERENCES:

Not Applicable

7.0 ANNEXURES:

ANNEXURE No.	TITLE OF ANNEXURE	FORMAT No.
Annexure – I	Sterile Raw Material Sample Receipt / Analysis Record	
Annexure – II	Sterile Raw Material Sampling Record	
Annexure – III	Sample for Analysis	
Annexure – IV	Sample for Identification Test	
Annexure – V	Sample Through Satellite Sample	

ENCLOSURES: SOP Training Record

8.0 DISTRIBUTION:

- Controlled Copy No. 01 — Quality Assurance Department
- Controlled Copy No. 02 — Quality Control Department
- Master Copy — Quality Assurance Department

9.0 ABBREVIATIONS:

AR No.	Analytical Report Number
GRN	Goods Receipt Note
HDPE	High Density Poly Ethylene
mm	Millimeter
No.	Number
QA	Quality Assurance
QC	Quality Control
RLAF	Reverse Laminar Air Flow
SOP	Standard Operating Procedure
SS	Stainless Steel
UV	Ultra Violet

10.0 REVISION HISTORY:

CHANGE HISTORY LOG

Revision No.	Details of Changes	Reason for Change	Effective Date	Updated By

PHARMA DEVILS

MICROBIOLOGY DEPARTMENT

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ANNEXURE – I
STERILE RAW MATERIAL SAMPLE RECEIPT / ANALYSIS RECORD

S.No.	Date	GRN / MRN No.	Material Name	Manufacturer / Supplier Name	B. No.	Mfg. Date	Exp. Date	Total Qty. Received	Analytical Report No.	Sampled Qty.	Sampled By Sign & Date	Status Released / Not Released	Released By Sign & Date	Remarks

PHARMA DEVILS

MICROBIOLOGY DEPARTMENT

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ANNEXURE – II
STERILE RAW MATERIAL SAMPLING RECORD

S. No.	Date	Area Cleaning Status OK / Not Ok	GRN / MRN No.	Material Name	B. No.	A.R. No.	Balance Used ID No.	Sampling		Sampling Tool ID No.	Container Sampled	Sampled Qty.	Sampled By Sign & Date	Checked By (QA) Sign & Date	Remarks
								From	To						

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ANNEXURE – III
SAMPLE FOR ANALYSIS

Product	**:**	_____
Batch No.	**:**	_____
Container No.	**:**	_____
Date of Sampling	**:**	_____
Sampled By (Sign & Date)	**:**	_____
Sample Qty.	**:**	_____
Storage Condition	**:**	_____

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ANNEXURE – IV
SAMPLE FOR IDENTIFICATION TEST

Product	**:**	_____
AR. No.	**:**	_____
Signature	**:**	_____
Date of Sampling	**:**	_____

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ANNEXURE – V

SAMPLE THROUGH SATELLITE SAMPLE

Sampled By:
Date of Sampling: