



# PHARMA DEVILS

PRODUCTION DEPARTMENT

## STANDARD OPERATING PROCEDURE

<b>Department:</b> Production	<b>SOP No.:</b>
<b>Title:</b> Cleaning and Operation of Pressure Jet Cleaner Machine	<b>Effective Date:</b>
<b>Supersedes:</b> Nil	<b>Review Date:</b>
<b>Issue Date:</b>	<b>Page No.:</b>

### 1.0 OBJECTIVE:

1.1 To lay down a procedure for cleaning and operation of pressure jet cleaner machine.

### 2.0 SCOPE:

2.1 The procedure is applicable to the cleaning and operation of pressure jet cleaner machine in Production area.

### 3.0 RESPONSIBILITY:

- 3.1 Technical associate : Cleaning and Operation  
3.2 Production Officer / Executive : verification and implementation of SOP  
3.3 Head of Production : Ensure compliance of the SOP.

### 4.0 DEFINITION (S):

4.1 NA

### 5.0 PROCEDURE:

#### 5.1 CLEANING

- 5.1.1 Check the status "UNDER CLEANING" on equipment with details.  
5.1.2 Ensure that the power supply is OFF and electric connection is disconnected to the pressure jet cleaning machine.  
5.1.3 Enter the cleaning start time in EQUIPMENT USAGE LOG SHEET SOP ("Making entries in equipment usage and cleaning log sheet").  
5.1.4 Open the outlet valve of both tanks to drain the purified water/SLS solution from the tanks.  
5.1.5 After complete drain of both tanks open the SS pipe assembly from both tanks and pump by disconnecting the SS clamps.  
5.1.6 Open the water/SLS sprinkler and flexible pipe from the SS pipe assembly.  
5.1.7 Clean the both tanks with 15-20 liters of purified water.  
5.1.8 Clean the SS pipe assembly, sprinkler & flexible pipe with purified water.  
5.1.9 Clean the outer surface of both tanks with lint free cloth.  
5.1.10 Dry the both tanks inside & outside, SS pipe assembly, sprinkler & flexible pipe compressed air or dry lint free cloth.  
5.1.11 Clean the control panel and water pump with dry lint free cloth.  
5.1.12 Replace the "UNDER CLEANING" status label with the "CLEANED" status label with date and signature of Production Officer and QA Officer.



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5.1.13 Record the cleaning completion time in EQUIPMENT USAGE LOG SHEET as per SOP (“Making entries in equipment usage and cleaning log sheet”).

### 5.2 OPERATION

5.2.1 Ensure ‘CLEANED’ label duly filled and signed is affixed on the equipment.

5.2.2 Connect the SS pipe assembly with tanks. Connect the sprinkler with SS pipe assembly using flexible pipe.

5.2.3 Using SS clamps tie the sprinklers to the upper assembly of unclean Octagonal Blender 3000 liters.

5.2.4 Open the lid of control panel and set the cleaning timer as required by rotating the timer knob clock wise from 0 to 10 (Number indicates the time in minutes/hours) and close the lid of the control panel.

5.2.5 Connect the power chord and switch on the power supply. R-PHASE (Red indicator), Y-PHASE (Yellow indicator) & B-PHASE (Green indicator) will glow.

5.2.6 Close the drain valves of both tanks. Fill the required quantity of purified water and SLS solution (SLS solution is used only in case of previous product API is Efavirenz) in the respective tanks.

**NOTE:** In case of previous product is Efavirenz use 2% SLS solution before final rinsing of the octagonal blender 3000 liters (For 1 liter 2% Sodium Lauryl Sulphate, take 20 g Sodium Lauryl Sulphate and dissolve in 1 liter of purified water)

5.2.7 Turn the controller knob to AUTO.

5.2.8 Open the valve of the purified water and press the GREEN colour Start button. After completion of purified water cleaning for required time STOP the machine by pressing the Red colour button. Close the valve of purified tank and open the valve of SLS solution tank.

5.2.9 Open the valve of SLS tanks and switch off the power supply of the machine.

5.2.10 Set the timer as required for cleaning with SLS solution as per point no 5.2.4

5.2.11 Press the GREEN colour Start button for SLS solution cleaning. After completion of SLS solution cleaning for required time STOPS the machine by pressing the Red colour button. Close the valve of SLS solution tank.

5.2.12 Now re-start the purified water cleaning cycle for required time as per point no 5.2.8

5.2.13 Record the PRESSURE JET CLEANER MACHINE operation details in EQUIPMENT USAGE LOG SHEET as per SOP (“Making entries in equipment usage and cleaning log sheet”).

### 5.3 PRECAUTION

5.3.1 Always ensure the sufficient quantity of purified water and SLS solution in the respective tanks before start of the operation.

5.3.2 Switch off the power supply prior to set the timer of the machine.

5.3.3 SLS solution cleaning is only applicable in case if previous product API is Efavirenz.



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5.3.4 Ensure complete dryness of both the tanks and there should no traces of water in both tanks.

### 5.4 CLEANING PROCEDURE FOR APF WATER SYSTEMS (350 Liters)

- 5.4.1 **Frequency for cleaning:** Clean the high pressure jet cleaner once at end of the day or whenever required.
- 5.4.2 Check the status "TO BE CLEANED" on equipment with details.
- 5.4.3 Before start the cleaning affix the "UNDER CLEANING" label on the equipment.
- 5.4.4 Switch off the electric supply and disconnect the plug of high pressure jet cleaner.
- 5.4.5 Completely drain the purified water from tank and line of high pressure jet cleaner through outlet valve
- 5.4.6 Clean the inner surface of the tank of high pressure jet cleaner with the help of sprinkler with purified water.
- 5.4.7 Wipe the outer surface, pipe, spray gun and platform of tank of high pressure jet Cleaner with cleaned wet lint free cloth followed by dry lint free cloth.
- 5.4.8 Clean the electric cable with cleaned dry lint free cloth.
- 5.4.9 Put "CLEANED" status on the equipment as per reference SOP.

### 5.5 MACHINE SET UP AND OPERATION PROCEDURE FOR APF WATER SYSTEMS (350 Liters)

- 5.5.1 Ensure that high pressure jet cleaner is cleaned.
- 5.5.2 Ensure that MANUAL DIAPHRAGM VALVE is closed at tank drain.
- 5.5.3 Ensure that MANUAL DIAPHRAGM VALVE is open at Tank isolation / Pump suction.
- 5.5.4 Take approx. 350 liters. or required purified water in high pressure jet cleaner.
- 5.5.5 Connect the electric cable to power connection.
- 5.5.6 Set the pressure approx. 20-150 kg / cm<sup>2</sup> of high pressure jet cleaner.
- 5.5.7 Start the high pressure jet cleaner machine for cleaning by pressing start button.
- 5.5.8 Press the tiger of gun and rotate the knob of gun to adjust the stream of water.
- 5.5.9 On completion of the process, switch OFF the high pressure jet cleaner.

### 6.0 ABBREVIATION (S):

- 6.1 SOP : Standard Operating Procedure.
- 6.2 SLS : Sodium Lauryl Sulphate.

### 7.0 REFERENCE (S):

- 7.1 SOP: Status labeling
- 7.2 SOP: Making entries in equipment usage and cleaning log sheet



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### 8.0 ANNEXURE (S):

8.1 NA

### 9.0 DISTRIBUTION:

9.1 **Master Copy** : Quality Assurance

9.2 **Controlled Copy (S)** : Production department (01) , Quality Assurance (01)

9.3 **Reference Copy (S)** : Production department (01)

### 10.0 REVISION HISTORY:

S.No.	Version No.	Change Control No.	Reason (s) For Revision	Details Of Revision	Effective Date