

# Fumigation/Fogging SOP

## Aerial disinfection

Fogging/fumigation is a technique in which the DISINFECTANT is sprayed through the specially designed nozzles of the SPRAY Dispensing Machine using water as a media of transportation. This is called Ultra Low Volume Fogging.

The purpose of fogging is to increase the possibility of contact between the disinfectant solution and air surfaces, especially those that are otherwise difficult to reach. Typically, fogging takes between 30–60 minutes followed by a ‘settling period’ of at least 1 hour before it is safe to re-enter the area. This means there is potentially an extended contact time for microbiological action, which increases the efficacy. Independent Food Industry research has shown that disinfectants based on PAA (EKO POWER PAA) can be applied for the deactivation of a large variety of pathogenic microorganisms, deactivated viruses and spores.

### Equipment- [BR 4 Fumigation Machine](#)



#### Functioning:

- The fogger machine generates a mist of oxidizing free radicals to kill microorganisms.
- High volume of aerosol output diffuses to every nook and corner, and reaches the highest levels of the processing area- Four directions projection of aerosol up to 20 ft.

#### Advantages:

- Shorter treatment time
- Non-stop working
- Maintenance free
- 3D aerosol contact
- Very thin film deposition
- Completely kills viruses, bacteria and spores.

## 2. Disinfectant - to be used

### [EKO POWER -PAA Sterized Forte 15 \(Peracetic Acid\)](#)

When [PAA](#) dissolves in water, it disintegrates to hydrogen peroxide and acetic acid, which will fall apart to water, oxygen and carbon dioxide. [PAA](#) degradation products are non-toxic and dissolve easily in water. EcoCare's [PAA](#) is NSF approved as non-rinsing disinfectant. Get NSF approval letter from our website or contact [EcoCare](#).

[PAA](#) is a very powerful oxidant; more efficient than chlorine and chlorine dioxide.

[PAA](#) can be used for the deactivation of a large variety of pathogenic microorganisms. It also deactivates viruses and spores.

[EKO POWER PAA](#) is a rinse free disinfectant and fumigant ideally suited for the Dairy, Food & Beverage industry due to its unique properties of being a strong liquid disinfectant. It does not leave any residue after use. Hence rinsing is not needed post fumigation. All forms of bacteria, fungi and viruses will be inactivated by [EKO POWER PAA](#). It is also very effective in removing bio-film. However, when fogging any compound, it is important to follow the guidelines carefully.



- EKO POWER PAA IS A RINSE FREE DISINFECTANT AND FUMIGANT IDEALLY SUITED FOR THE DAIRY, FOOD & BEVERAGE INDUSTRY DUE TO ITS UNIQUE PROPERTIES OF BEING A STRONG LIQUID DISINFECTANT. IT DOES NOT LEAVE ANY RESIDUE AFTER USE. HENCE RINSING IS NOT NEEDED POST FUMIGATION. ALL FORMS OF BACTERIA, FUNGI AND VIRUSES WILL BE REMOVED BY FORTE. IT ALSO VERY EFFECTIVE IN REMOVING BIO-FILM. HOWEVER, WHEN FOGGING ANY COMPOUND, IT IS IMPORTANT TO FOLLOW ALL PROCEDURES CAREFULLY. PLEASE READ FULLY BEFORE YOU START.



## Fumigation SOP

### Thorough cleaning of area is must before fogging/fumigation.

1. In order to maintain maximum effectiveness of the fogging, it is important to seal off the room to be fogged as much as possible. Close all ventilation systems, door etc...
2. Cover any unused open raw materials like sugar /pulp / Crowns & any other packaging material which may come in contact with the beverage / Food being manufactured.

**SAFETY NOTE:** While you are sealing off the room, make sure that you post signs, "STAY OUT" at all the entrances of the room.

✓ Place the fogging equipment in the room to maximize exposure to all surfaces. This equipment should be automated so that it can be set to operate after everyone has left the building. The equipment should also be able to deliver a drop size of around 30 microns.

✓ Make a fresh solution of 1 % [PAA](#) with RO water. Add this solution to the reservoir of the fogging equipment.

✓ Determine the amount of solution that you will need to fog by taking the cubic footage/meter of the room you want to fog.

✓ The run time should be determined by the size of the area to be treated. There should be at least 45 min of contact time after fogging.

## Fogging time Calculation

This data is based on Nozzle used in Fogger supplied by the EcoCare

Particle Size In Micron	SPRAY OUTPUT QUANTITY	APPROXIMATELY VOLUME COVERED in m3
20-30 micron	25 L	2800

Step 1: Find out Volume of room you want to fumigate?  $L \times H \times W$

Step 2: How much air pressure should be provided to the fogger ?

For fogging, the air input pressure setting should be 5-6 bar.(~ 20 Micron).

Step 3: How much time will it take for fogging?

Refer to the time taken for the coverage column. In our example for 2800m3 volume approximately it will take 30 min

Step 4:How much solution will I require for my room volume ? As calculated volume of room is 2800 m3 and 25 lit of solution for fogging.

Step 5:How much disinfectant needed to add in water for fogger? The Recommendation is 1% of PAA of 25 ltrs = 250 ml

After fogging is completed the room should be allowed to stand for at least 45 min to 1 hour to allow the fog to dissipate.

**Safety Note:** The person that is assigned this task **MUST** wear the proper PPE before entering the room after fogging.

## Recommended requirements before and after Fogging

Thorough cleaning of walls, tanks and pipe is recommended before fogging.

Minimize the traffic in fogged room post fogging.

Maintain AHU and Duct- keep all filter clean and maintain them as per the standards. Clean & Sanitize all drains regularly.



Contact Us for clarification

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We will be glad to help you !



**EcoCare**  
Hygiene & Water

