



Application Note #66

Decontamination of Empty Grow Rooms

There are certain ways a grower can prevent or limit the spreading of contamination with pests or pathogens in a cannabis facility. One of the main points of having an indoor grow room is to control every aspect of the plant's environment. However, it will not matter how well growers control the water, nutrients, and humidity if everything in the space is dirty. Regularly handwashing, surface wiping, and floor scrubbing are necessary precautions to avoid contamination, but traditional cleaning methods do not account for airborne mold spores, tight spaces, and human error or oversights. A complete removal of all microbial life including fungi, bacteria, spores, viruses and any other pathogens requires a sterilization-level process. A sterile environment from the start, as well as only sterile items being introduced into that environment, will help best assure lack of mold and other contaminants.

When a grow room is empty, that is the ideal time to implement a complete decontamination of the space. It is particularly recommended for hydroponic systems, planting pots, and cloning areas. A sterilization at the end of every harvest is also a good insurance no pathogens will proliferate when the next crop starts. When switching from one grow to the next, make sure to also sanitize all pots and materials as well. This practice “resets” whatever contaminants may be present on supplies and in the room (even if not manifesting as an outright contamination) to the lowest possible levels. Even if products are taken directly out of the box, it is still important to make sure they are clean before being brought into the grow room.

Gaseous chlorine dioxide (CD) is an EPA registered sterilant that can be utilized prior to any plants entering the room to ensure any pre-existing mold spores or other microbial contaminants are remediated. For a complete kill of all potential organisms in the entire facility, chlorine dioxide gas is the optimal solution as it is a gas at room temperature, filling the entire space evenly and completely, decontaminating every surface, crack, or crevice with no residues or additional cleanup. CD gas is non-carcinogenic, non-flammable, and safer on materials than bleach, ozone, and hydrogen peroxide.

Another tool that can be used is Ultraviolet light (UV-C). UV-C disinfection is a fast, simple to use method, capable of providing a 99% reduction of spores within minutes also without any dangerous residues to be wiped down or neutralized afterwards. UV-C is an easy way to achieve high-level disinfection to any exposed surface in minutes. This chemical-free and residue-free disinfection method will help reduce mold spores, therefore minimizing future risk of exposure to the cannabis plant. This is best utilized in a



completely empty space to ensure maximum exposure to the UV-C light. If there are complex shapes to the space or objects in the space, the device may need to be repositioned or multiple devices may be needed to ensure as many surfaces as possible are exposed to the disinfecting light. UV-C trades off some efficacy in its ability to disinfect the hard-to-reach surfaces in order to provide a quicker and simpler process than CD gas, allowing facilities to choose which solution best fits their needs.

Controlling mold and other microbial contaminants is essential to any operation as it is a strong threat to cannabis. Before plants enter the grow room, whether it is a new facility or at the end of harvest, measures should be taken to ensure no dangerous organisms are present that can result in wreaking havoc on the new crop. Ultraviolet light disinfection and chlorine dioxide decontamination technologies provide efficient kill of molds and spores as well as other common bacteria and viruses.