

# Effectiveness of Bluezone® Model 420 in a Cannabis Flower Room

*Bluezone's ultraviolet enhanced oxidation technology is a breakthrough approach to air purification; Bluezone kills or converts chemical and biological impurities inside a self-contained reaction chamber using both oxidation and ultraviolet irradiation.*

## Objective

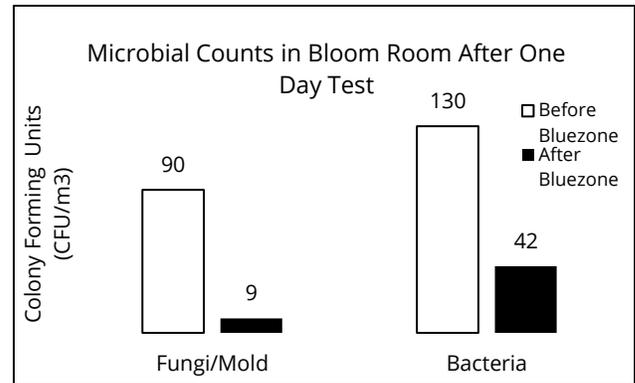
Test the impact of Bluezone on microbial load and VOC levels at a grow facility.

## Methods and Materials

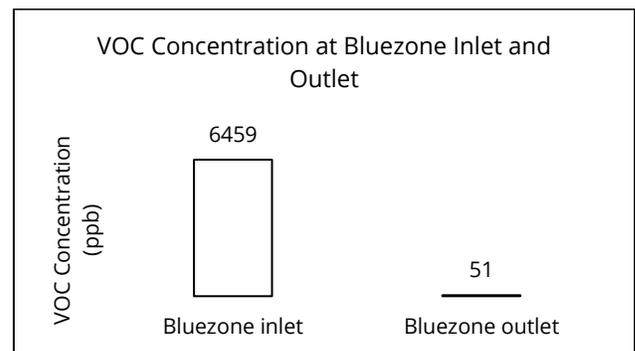
- Microbial testing was conducted in an flower room before and after Bluezone operation. The flower room was tested before Bluezone installation. After initial testing, Bluezone was installed in the flower room and ran for 24 hours.
- VOC measurements were made at the inlet and outlet of an operating Bluezone using a ppb Rae photoionization detector.
  - Air was pulled through an air pump onto two different types of agar plates, MEA and TSA.
  - After sampling, plates were placed in an incubator for 5 days.
  - CFUs (colony forming units) were counted on each plate and used to calculate CFU/m<sup>3</sup>.
  - A probable statistical total count was used to calculate the most accurate CFU/m<sup>3</sup>.

## Results

Test results from flower room air sampling shows dramatic reduction of microbial load after only one day of Bluezone operation.



Measurement of VOC levels in corridor outside grow rooms shows near complete (>99%) removal of VOCs by Bluezone.



## Conclusion

Results suggest Bluezone Model 420 greatly improves air quality by reducing airborne mold, bacteria, and VOCs in cannabis flower rooms.