Demonstrating the Efficacy of Airocide in Combatting Botrytis and Other Airborne Microbes in Cannabis Cultivation

INTRODUCTION

In the cannabis cultivation industry, maintaining air purity is critical to preventing the spread of pathogens like Botrytis and powdery mildew. The Airocide GCS-50 UVC Air Purifier, leveraging NASA-developed Photocatalytic Oxidation (PCO) technology, has demonstrated significant advantages over conventional air-purification systems by effectively oxidizing airborne pathogens, including bacteria, fungi, viruses, and ethylene gas. This report synthesizes two studies conducted on cannabis cuttings in rooting chambers to assess Airocide's efficacy in pathogen reduction and plant health maintenance.

STUDY OVERVIEW

Cutting Study

- **Objective:** To evaluate the efficacy of the Airocide system in reducing Botrytis in stored cannabis cuttings over two months.
- **Methodology:** Cannabis cuttings of multiple strains were divided into two groups—one stored in Airocide-enhanced chambers and the other in conventional cool storage. Over a two-month period, visual inspections were conducted weekly to monitor signs of Botrytis and leaf health.
- **Findings:** By Week 48, Airocide-treated cuttings remained Botrytis-free, while control samples displayed symptoms of the pathogen. Airocide-treated plants retained vibrant green foliage, whereas control samples exhibited yellowing and other stress symptoms. See image below.

AIROCIDE PROTECTED

CONTROL COOL STORE

STUDY OVERVIEW

Rooting Study

- **Objective:** To investigate Airocide's influence on rooting quality and growth in cannabis cuttings post-storage.
- **Methodology:** Cuttings previously stored in Airocide chambers and control storage were potted and monitored over nine weeks. Growth metrics, including side shoot development and root mass, were recorded.
- **Findings:** Airocide-treated cuttings demonstrated improved root development, with denser, more robust roots compared to control cuttings. Vegetative growth, while not significantly different, indicated higher vigor in Airocide-treated plants. See image below.

AIROCIDE PROTECTED

CONTROL COOL STORE

COMPARATIVE TECHNOLOGY ANALYSIS

Feature	Airocide GCS-50 UVC Air Purifier	Traditional Cool Storage
Pathogen Elimination	Yes (bacteria, fungi, viruses)	Limited
Ethylene Reduction	Yes	No
Effectiveness in Rooting	Enhanced root mass and side shoots	Moderate growth
Leaf Health	Maintains green, healthy foliage	Increased yellowing
Duration of Storage	Up to 2 months without disease	Max 5 weeks

CONCLUSION

The studies confirm that Airocide provides superior air purification, effectively eliminating Botrytis and promoting healthier root development in cannabis cuttings. Airocide's integration into cannabis cultivation environments can significantly extend the storage life of cuttings, maintain foliage health, and enhance root growth, making it a viable solution for long-term pathogen control and crop quality assurance.For optimal disease management and quality preservation, implementing Airocide in cannabis cultivation facilities is highlyrecommended.