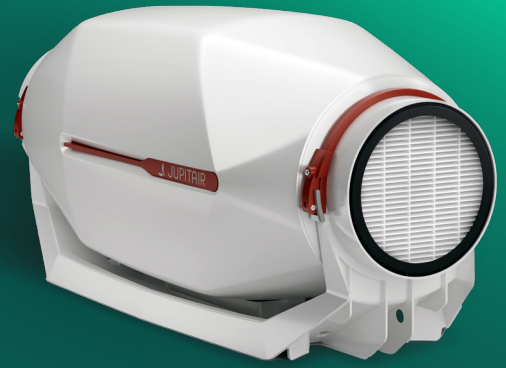


Stop mold, save terpenes, cut costs:

Optimize cannabis cultivation with energy-efficient air purification for fungal spores and ethylene removal.



Mold, other pathogens, and ethylene – challenges in medical cannabis cultivation

One of the main challenges in medical cannabis cultivation is the presence of **airborne fungal spores** such as *Botrytis cinerea* (gray mold), *Oidium spp.* (powdery mildew), *Aspergillus spp.*, and *Alternaria alternata*. These pathogens can cause 20–50%* yield loss and lead to the rejection of up to 10%** of harvested product after drying. Others, like *Fusarium oxysporum* or *Cladosporium spp.*, further compromise plant health.

Airborne contaminants—including **ethylene**, a natural ripening hormone—accelerate flower aging and reduce product quality. Combined losses from contamination and crop protection can increase annual operating costs by as much as 10–15%***.



Gamma irradiation is often used in response. While effective against mold, it also damages terpenes responsible for aroma, flavor, and therapeutic properties, and negatively affects the visual appeal of the product.

* Nature, 2023, ** eClinical Medicine, 2023, *** Cannabis Science & Technology, 2019



HEPA filter-free and versatile method of air disinfection

Jupitair devices are a modern solution for cannabis cultivation with scientifically proven effectiveness. They efficiently **remove fungal spores, other pathogens, intensive cannabis odors (VOCs, terpenes) and harmful gases in real-time**. They utilize semiconductor photocatalytic technology, which is **environmentally friendly, energy-efficient, and safe for humans**, as it does not generate ozone or by-products.

How does it work?

Photocatalysis, developed over 50 years, uses light and nanomaterials, such as TiO_2 (titanium dioxide), to oxidize pathogens and break down volatile organic compounds (VOCs) into harmless substances like carbon dioxide (CO_2) and water (H_2O). This **process completely destroys contaminants** and does not require filter replacement, which **reduces costs and increases efficiency**. It provides a **safe cultivation environment with higher humidity**, promoting **larger and healthier cannabis buds** while minimizing the risk of mold and pathogens.

Key benefits, Applications & Air purification performance



System advantages and cost efficiencies:

- **No HEPA filters** - Lower operational costs
- **Low Energy Consumption** (92W per 100 m³)
- **Longevity** (minimum 5 years of continuous operation)
- **Safety** (PZH and CE certifications)



Applications in the Cannabis industry

- Production and Processing
- Storage and Drying Rooms
- Transportation and Warehousing
- Testing Laboratories
- Extraction Facilities
- Medical Cannabis Pharmacies



Easy installation:

- Ceiling, wall, or suspended mounting
- Compact dimensions
- Simple power integration
- Aesthetic design



Contaminant removal efficiency (up to 99.999%):

- **Fungal spores:** including *Botrytis cinerea*, *Oidium spp.*, *Alternaria alternata*, *Aspergillus*
- **Gaseous Decay Products:** ethylene (up to 98% in 30 minutes)
- **Microorganisms:** viruses (CCV - Cannabis cryptic virus, HLVd - Hop latent viroid), bacteria (*Pseudomonas*, *Xanthomonas*), mycotoxins
- **Strong cannabis odors** (terpenes, VOCs)

Elevate the purity and value of your cannabis crops.

Contact us today to protect your harvest's quality, aroma, and compliance.



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