

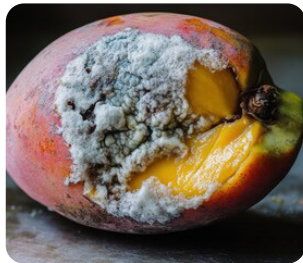
# Ensuring food stays fresh, safe and natural:

Energy-efficient removal of ethylene & fungal spores, prolonging the shelf life of fruits & vegetables.



## Mold, ethylene and pesticides - an expensive mix

In the fruit storage industry, **airborne contaminants** are a major cause of **spoilage**, with fungal spores like **Botrytis cinerea** (grey mold), **Penicillium expansum** (blue mold), and **Alternaria alternata** posing significant threats. These harmful pathogens accelerate decay and compromise fruit quality, forcing storage and transport facilities to rely on chemical agents such as pesticides and fungicides. This not only increases distribution costs and undermines the natural integrity of the produce but also makes it challenging to **secure organic certifications**, ultimately affecting both market competitiveness and consumer trust.



Even worse, some ripening fruits or vegetables (including grapes, tomatoes, apples, bananas) naturally produce **ethylene**, a gas which accelerates their rotting. Excess ethylene causes various types of damage, such as necrosis or paleness (chlorosis) on the leaves.



## HEPA filter-free and versatile method of air disinfection

Jupitair air disinfection devices are a solution with **scientifically proven effectiveness**. In real time and in the presence of people, they remove mold spores, other pathogens and gases from the room in a record-breakingly efficient way. Jupitair purifiers use semiconductor photocatalysis technology. It is an ecological and energy-saving method of extending the freshness of food. It does not generate ozone or other harmful by-products.

## How does it work?

Photocatalysis technology, which has been known for over 50 years, is based on the activation of nanomaterials with UV light by LED diodes. As a result of the photocatalytic oxidation reaction, it deactivates mold, microorganisms and other dangerous pathogens in a health-safe manner, and decomposes volatile organic and inorganic compounds into harmless substances, such as nitrogen, carbon, etc. The technology does not require the use of filters because the photocatalytic nanolayers do not accumulate contaminants, but destroy them completely.

## Key benefits, Applications & Air purification performance



### System advantages and cost efficiencies:

- **No HEPA Filters** – Lower operational costs
- **Low Energy Consumption** (92W per 100 m<sup>3</sup>)
- **Longevity** (24/7 + minimum 5 years of continuous operation)
- **Safety** (PZH and CE certifications)



### Application in the Food Industry:

- Storage & cold-chain (ambient and refrigerated warehouses)
- Container & road transport
- Greenhouses & Vertical farming
- HACCP-Grade processing (meat, dairy, ready-to-eat)



### Easy installation:

- Suspended or integrated with ventilation
- Compact dimensions
- Simple integration with power systems
- Aesthetic design



### Contaminant removal efficiency (up to 99.999%):

- **Fungal spores:** including Botrytis cinerea, Penicillium spp., Alternaria alternata
- **Gaseous Decay Products:** ethylene (up to 98% in 30 minutes)
- **Microorganisms:** bacteria (Listeria, Salmonella, Pseudomonas), viruses, mycotoxins
- **Unpleasant odors:** musty, spoilage-related

**Transform your fruits & vegetables storage operations today.**

Contact us now to **secure your produce's natural freshness and reduce spoilage losses!**



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