

MIATECH ETHYLENE & BACTERIA CONTROL: BIO-TURBO

What is Ethylene?

Ethylene (C₂H₄) of Molecular Weight 28.5 is a naturally produced gas resulting from various industrial processes exhaust and industrial waste. Ethylene is produced as well by some plants, fruits and flowers. Ethylene is a destructive pollutant when present in controlled storage spaces of fruits, produce, plants and flowers



At what level Ethylene is a problem?

Amazingly at very low levels! While the Ethylene threshold for humans is near 270 ppm, Ethylene starts affecting plants, flowers, produces and fruits at concentrations as low as 0.1 ppm. Carnation blooms can be triggered by concentrations below the 0.1 ppm. The only place where Ethylene is beneficial is when used in accelerated degreening and ripening rooms (Ex: Bananas ripening).

Ethylene is malicious:

Ethylene is malicious since it is colorless and odorless. It cannot be seen nor smelled. It can only be detected by its destructive action on your stored fruits, produces, plants and flowers or alternatively by gas detection equipment,

What are the effects of Ethylene to fresh produce?

- Discoloration & black spots
- Accelerated ripening
- Unpleasant odor
- Leaves separating from plant
- Shrinkage & weight loss



The other enemy: Airborne Pathogens

Millions of \$ worth loses are caused each year by Airborne Pathogens during storage or transit of fresh produce.

Most damaging Airborne Pathogens are bacteria, mold and fungi like botrytis, penicillium italicum and penicillium digitatum



Miatech Bio-Turbo will deal with both Evils: Miatech's New Bio-Turbo is the Most Advanced Ethylene Gas Removal and Airborne Pathogen Killing System.

Bio-Turbo uses Unique 4-stages

Technology:

STAGE-1- AIR FILTER: Removes dust and visual particles from the air.

STAGE-2- CELL DISRUPTER: An anti-microbial chemical applied to the surface of a specially designed disrupter. This anti-microbial works by piercing and rupturing the cell membrane of the cells that makes up these airborne pathogens as they pass by. The process stops the normal life development and destroys the cell with an efficiency rate of 99.5%+.

STAGE-3-OZONE CHAMBER: This chamber uses the positive effects of ozone to eliminate ethylene gas. Ozone is proven to be very effective with 99.99% efficiency rate.

STAGE-4-BIO CLEAN MODULE: In this final stage, a catalyst is used to change the ozone into clean oxygen. The catalyst creates a reaction breaking down the ozone molecule to oxygen. From here the clean oxygen is released back into the environment



Benefits of using Bio-Turbo:

- *User friendly and low maintenance*
- *Removes Ethylene harmful to produce and floral*
- *Eliminates 99.9% of bacteria and airborne pathogens*
- *Provides an overall better environment*
- *Causes produce to have a better appearance and freshness longer*
- *Reduces perishables shrink by about 25%*
- *Will provide a return on your investment*

