

## Ethylene leads to over-ripening of various fruits and vegetables

Ethylene ( $C_2H_4$ ) is an odorless and colorless plant hormone in gaseous form, that exists in plants and which is triggered at maturity in fruits. Ethylene is also known as the 'death or ripening hormone' and plays a regulatory role in many processes of plant growth & development

Being a gas, Ethylene can permeate through barriers like corrugated cardboard, plastic containers and natural barriers like cell walls and plasma walls. When Ethylene comes in contact with the Ethylene receptors, a reaction on the genetic level starts, depending upon which stage of the life cycle the fruit is in.

## Bad effects of Ethylene on various fruits and vegetables

Ethylene effect on fruits	
Apples	Scald
Grapes	Mold
Bananas	Decay
Apricots	Decay
Pears	Browning
Passion Fruit	Shriveling and weight loss
Cherimoya	Rapid softening

<b>Ethylene effect on vegetables</b>	
Potatoes	Sprouting
Onions/Garlic	Odor
Carrots	Bitterness
Green leafy vegetables	Loss of color
Pears	Browning
Lettuce	Darkens and turns slimy
Cabbage	Leaf abscission

### **What does Ethylene removal mean to you?**

- A competitive edge with better looking and better tasting product
- Increased customer satisfaction
- Longer marketability of produce
- Decreased shrinkage due to spoilage
- Increase in profitability
- Decrease in rejections
- Reduced waste

### **PureSite: A step ahead, always**

The PureSite Ethylene mitigation System is a harmless process that does not affect the properties of fruits or vegetables. Ethylene that is released naturally can be continuously neutralized by activated

oxygen, safely converting Ethylene into Carbon Dioxide and Water. Remember that Ethylene is a gas and can permeate through barriers. Activated Oxygen is a gas and smaller molecules so it too will permeate barriers and neutralize the Ethylene in an entire room.

PureSite Atmospheric System extends shelf life of fruits and vegetables, minimizes loss due to decay, ensures off season availability and eliminates any need for harmful preservation practices that use Nitrogen and Sulphur gas. Fruits and vegetables retain their stored state and can be ripened per demand without bearing traces of toxic gases.

**PureSite System safely and effectively eliminates 99% of Ethylene by simply converting it into Carbon Dioxide and Water.**

When Ethylene come in contact with Activated Oxygen it is immediately neutralized. The instantaneous chemical reaction between Activated Oxygen (O<sub>3</sub>) and Ethylene (C<sub>2</sub>H<sub>4</sub>) produces only Carbon Dioxide (CO<sub>2</sub>) and Water (H<sub>2</sub>O), and has no bad effects on fruits and vegetables.

When the Ethylene load in a room is eliminated, the activated oxygen simply returns to its original Oxygen (O<sub>2</sub>) state.

The PureSite Adaptive Control System simply and safely works with your existing refrigeration and air handling equipment to distribute Activated Oxygen though out the treated area, permeating every area of the room. There are no bottles to refill, no consumables to replace.