



BRY-AIR ETHYLENE SCRUBBER (BES)

The Game Changer Has Arrived



www.bryairfiltration.com

Setting New BENCHMARKS in Gas Phase Filtration



Bry-Air Ethylene Scrubber (BES)

Technically Proven & Cost-Effective Alternative for Controlled Atmosphere (CA) Storage Systems

What is Ethylene?

Ethylene (C₂H₄) is an odourless and colourless plant hormone in gaseous form that exists in plants, and which is triggered at maturity in fruits. Ethylene, also known as the 'death or ripening hormone' plays a regulatory role in many processes of plant growth and development.

What Does Ethylene Do?

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

What Does Ethylene Removal Mean to You?

Removing ethylene means keeping fruits, vegetables and fresh cut flowers longer. It results in:

- 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
- Decreased produce shrivelling and weight loss
- Decreased produce rejections
- Reduced waste

Bad Effects of Ethylene on Various Fruits and Vegetables

Fruits	Ethylene effect on fruits
Apples	Scald
Grapes	Mold
Bananas	Decay
Apricots	Decay
Pears	Browning
Passion Fruit	Shrivelling and weight loss
Cherimoya	Rapid softening
Vegetables	Ethylene effect on vegetables
Potatoes	Sprouting
Onions	Odour, sprouting
Carrots	Bitterness
Green Vegetables	Yellowing, Loss of green color
Lettuce	Darkens and turns slimy
Cabbage	Leaf abscission

Presence of ethylene in amounts ranging from a few parts per billion (ppb) to a few parts per million (ppm) can reduce plant vigour, decrease life of various plant parts and reduce stock quality. 0.1 ppm is commonly considered the threshold level for ethylene action on plants.



How Does Bry-Air Ethylene Scrubber (BES) Remove Ethylene?

Ethylene is slightly heavier than air. When it is placed in airflow on the floor in a closed system, it sucks air mixed with ethylene from its lower ducts and passes it through the specially designed Honeycomb Matrix chemical filter where it immediately neutralizes ethylene chemically and releases clean air outside having no bad effects on fruits and vegetables. Bry-Air's new Honeycomb Matrix based macro porous chemical filters are metal silicates impregnated with potassium permanganate (KMnO₄). Potassium permanganate is an oxidizer that reacts with ethylene in the air and releases CO₂ and water.

Few Advantages of Bry-Air Ethylene Scrubber Comprising of Honeycomb Chemical Filter:

- Energy saving because of very low pressure drop
- Low footprint
- Filter Cassettes can be replaced with ease without any expertise.
- Robust CNC fabricated construction, painted unit.
- Kills bacteria, pathogens and viruses from air.

Ethylene Control is a must for all passive cold stores, storing perishable fruits and vegetables for long durations. For example:

- Apple storage
- Potato storage for potato chips
- Potato storage for seed
- Tomato seed storage
- Onion storage

Bry-Air Ethylene Scrubber (BES)

Ethylene removal is a natural process that does not affect the property of fruits or vegetables. Ethylene that is released naturally can be continuously removed by Bry-Air Ethylene Scrubber (BES) through the process of adsorption and chemisorption.

Bry-Air Ethylene Scrubber (BES) extends shelf life of fruits and vegetables, minimises loss due to decay, ensures off season availability and eliminates harmful preservation practices that use nitrogen and sulphur gas. Fruits and vegetables retain their naturalness: These can be ripened as per demand without bearing traces of toxic gases.



Bry-Air R&D

Comprehensive know-how about Gas Phase Filtration systems, and the use and development of innovative solutions for industry are what makes Bry-Air stand out as a research oriented enterprise. Continuous investment in research and development, combined with extensive application know-how of our technical experts are the sources of our innovative skills. Bry-Air recently, setup a state-of-the-art Gas Phase Filtration laboratory at its Gurgaon Plant. The lab is one of its kind in the world. The lab is equipped with world class technology and systems. It is capable of testing the performance of impregnated/ non-impregnated loose granular media. The tests can be conducted as per ISO/ASHRAE standard 145.1 and BSR/ASHRAE standard 145.2/ISO standard 11155-2 guidelines.



4 EASY WAYS TO REACH US



Submit online form at
www.bryairfiltration.com



Email us at
bryairmarketing@pahwa.com



Fax us at
+91-124-4184400



Call us at
+91-124-4184444

Bry-Air® Bry-Air (Asia) Pvt. Ltd.

419-420, Udyog Vihar, Phase-III, Dist. Gurgaon - 122016, Haryana, India
Tel.: +91-124-4184444 • Fax: +91-124-4184400 • E-Mail: bryairmarketing@pahwa.com

Our Domestic Offices: Delhi • Chandigarh • Mumbai • Vadodra • Kolkata • Chennai • Bangalore • Hyderabad • Kochi

Our Overseas Offices: USA • China • Malaysia • Switzerland • Brazil • UAE • Philippines • Japan • Vietnam • Indonesia • Australia • Nigeria