

# Product Bulletin for

## The Ethylene Control Market

**Ethylene** is a naturally occurring gas that is also produced by plant respiration, ripening fruit, and cut flowers. It causes fruits and vegetables to ripen and flower buds to open and has long been recognized as a significant factor in the storage and transport of fresh produce and products in the horticultural industry. Ethylene concentrations ranging from a few parts per billion (ppb) to a few parts per million (ppm) can reduce plant vigor, shorten the life of various plants and reduce produce quality and shelf life.

**Isolette Sorbers and FA Sachets** are superior ethylene adsorbers that make use of Purafil's patented dry-scrubbing media in a durable, water-resistant, gas-permeable packet. The use of Purafil® SP media provides highest ethylene removal capacity and can extend the shelf life of produce from days to weeks.

**Typical Applications:** Controlled atmosphere (CA) storage of horticultural products, ripening rooms for "green" fruits and vegetables to increase time between harvesting and distribution, and preserving freshness of produce during shipping and storage.

**Longer Service Life:** The Isolette and FA Sachets offer a higher media loading capacity and up to ten times the removal capacity of other ethylene control filters. Purafil's SP media has 3 times more capacity than other products

**Enhanced Functionality:** The Isolette Sorbers and FA Sachets have high air/gas permeability and are effectively non-dusting. Purafil SP media is non-toxic and non-hazardous and will not support bacterial or fungal growth.



### Isolette Sorber

|                   |                              |
|-------------------|------------------------------|
| Media Type        | Purafil SP                   |
| Media Qty         | 10 gm                        |
| Ethylene Capacity | Low - medium concentrations* |



### FA Sachet

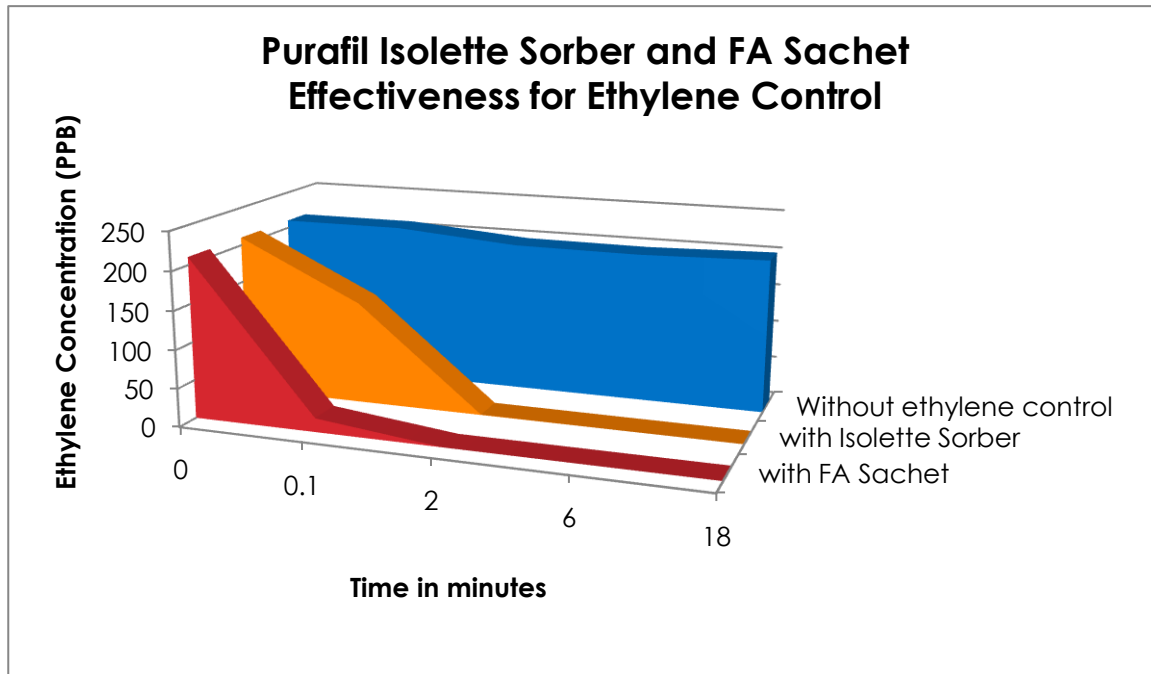
|                   |                      |
|-------------------|----------------------|
| Media Type        | Purafil SP           |
| Media Qty         | 87 gm                |
| Ethylene Capacity | High concentrations* |

### Operating Range

|             |                                  |
|-------------|----------------------------------|
| Temperature | 4° F to 125° F (-20° C to 51° C) |
| Airflow     | up to 500 ft/min (2.54 m/sec)    |

### Chemical Media

|                   |   |
|-------------------|---|
| Patented SP media | 12% Sodium permanganate + activated alumina |
|-------------------|---|



\*Testing performed by the University of California, Davis

The graph shown here illustrates the effectiveness of the Isolette Sorbers (10 g Purafil SP media) and FA Sachets (87 g of Purafil SP media) for controlling ethylene in static control applications such as a placement in a box of fruit, vegetables, cut flowers, etc. Testing confirms that a single Isolette Sorber or FA Sachet can effectively reduce ethylene concentrations to near zero very quickly and for extended periods of time which effectively eliminates all effects of ethylene gas on these sensitive commodities.

**Isolette Sorber:** Used with LOW-to-MEDIUM ethylene producing fruits, vegetables, and flowers in shipping / storage boxes containing up to 40 lb (18 kg) of fresh produce or horticultural products.

**FA Sachet:** Used with HIGH ethylene producing fruits in shipping / storage boxes containing up to 40-50 lb (18-22 kg) of fresh produce.

**The effectiveness of purafil media has been supported in publications by:** Cornell University, Michigan State University, New York State College of Agriculture and Life Sciences, Oregon State University, and the United States Department of Agriculture.

**\*Ethylene concentration examples:**

Low - Flowers, berries, asparagus, broccoli, kiwi, and orange.

Medium - Bananas, mangos, melons, plums, and prunes.

High - Peaches, pears, nectarines, apricots, avocados, and cantaloupes.