A Guide to Airport Air Quality

Jet fumes consists of both high and low molecular weight contaminants. Activated carbon is the product of choice for high molecular weight contaminants, whereas potassium permanganate is best used for low molecular weight contaminants. Based on this, the product of choice is a blend, however the decision as to the best product to use is based upon many factors including contaminants present, levels of contaminants and economics. The goal is to reduce contaminants below their respective odor and health thresholds so as to protect the occupants and create a good working environment.

Activated carbon is often times used alone in several airport applications and has been found to be sufficient. For example O'Hare Airport uses only activated carbon. The benefits to using just carbon is that it can be reactivated and saves disposal costs, therefore large installations using refillable panels tend to strictly use carbon. While the blend might remove more of the lower molecular weight contaminants it has been found that the straight carbon removes enough to sufficiently achieve the desired goal.

A system with potassium permanganate alone is not recommended for both economics and performance.

The choice therefore lies between activated carbon and a blend of carbon and permanganate. In disposable filter applications where reactivation is not an option a blend selection of choice. It will effectively remove more of the contaminants present at an airport location than will a straight activated carbon filter.