

PERFORMANCE OF VARIOUS GAS-PHASE SORBENT MEDIA FOR REMOVAL OF VOCs AND ACID GASES

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Breathing zone air in commercial and residential buildings contains contaminants from outdoor air and from indoor sources. Contaminants such as ozone and sulfur dioxide (SO₂) may enter buildings at unacceptable levels especially in nonattainment regions. Indoor sources include furniture and carpet off-gassing, cooking fumes, and personal care products which will produce various VOCs often at fairly high levels. To produce acceptable or cleaner air for breathing, gas-phase air cleaners may be used. It is important to choose air cleaners with sorbents that remove the contaminant that you are concerned with. Sorbents may work simply with adsorption or may use chemisorption to react with the contaminant. Additionally, sorbents may be impregnated to be more effective for specific contaminants.

Thus, contaminants will show different breakthrough curves for different contaminants. In order to understand what sorbent to use, even what questions to ask when choosing a sorbent, it is important to understand the basics of these differences. This presentation explores different medias and their efficacy at removing various VOCs and acid gases.