





Executive Summary

What makes Synexis® unique is that they are the premier manufacturer of the technology behind Dry Hydrogen Peroxide (DHP™) gas. The DHP™ is made from the humidity and oxygen that are already present in a space or facility. The unit converts these elements into a gas that is within acceptable safety limits for continuous use in occupied environments. Synexis® products are available either as portable units that can be placed on a stand or mounted to a wall, or as units that can be placed in-duct.

The science behind the safety is that the Synexis ${}^{\circ}$ DHP ${}^{\circ}$ only has 5-25 parts per billion, which is millions of times less than vaporized hydrogen peroxide but is still effective at minimizing contaminants. To put things into perspective, at a DHP concentration of 10 parts per billion, there is one molecule of DHP in a volume of 4 cubic microns; the same volume (4 cubic microns) of 3% aqueous solution of hydrogen peroxide (H2O2) found in your medicine cabinet contains 2.34 billion molecules of hydrogen peroxide. Thus, in terms of number of molecules over time, exposure to a tiny 4 cubic micron droplet of 3% hydrogen peroxide solution for 1 second is equivalent to 74 years of exposure to the same volume of DHP. If you vaporize the aqueous solution of hydrogen peroxide, it is not safe for humans while in the space; in contrast, the concentration of the hydrogen peroxide gas created by Synexis® is acceptable for occupied spaces. To reiterate, the DHP™ concentrations fall far below acceptable limits for human exposure established by the Occupational Safety and Health Administration (OSHA).

Consequently, a Synexis® unit can help safely and continuously address certain indoor air contaminants and facilitate surface cleanliness, 24/7/365. Because DHP™ is a near ideal gas, it goes virtually everywhere the air goes and can clean the different parts of a room. Thus, Synexis® can address surfaces that we can't reach or aren't normally cleaned, such as the tops of tall cabinets in a classroom or the insides of desk drawers.

4 Approaches for a Healthy Indoor Living Space









Dilute Increase ventilation with outdoor air

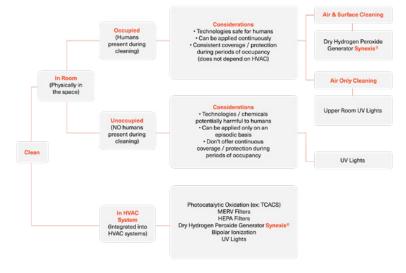
Exhaust Keep local exhausts running

Contain Control indoor humidity

Clean Safely use air cleaning technology as appropriate



Cleaning Technology Options



& synexis

Synexis[®] and Dry Hydrogen Peroxide (DHP™) Technology are registered trademarks owned by Synexis. LLC.

SYS-SLB028-EN

Integrate Synexis® into your HVAC system or use it as a stand-alone unit in any room

Trane" – by Trane Technologies" (NYSE: TT), a global climate innovator – creates comfortable, energy efficient indoor environments through a broad portfolio of heating, ventilating and air conditioning systems and controls, services, parts and supply. For more information, please visit trane.com or tranetechnologies com. All trademarks referenced in this document are the trademarks of their respective owners.

© 2021 Trane. All Rights Reserved

ISV VE

Contact a Trane® IAQ expert today