

SchoolSafe

Enhanced Hygiene for
School Systems



Mission

Utilize physics and chemistry to improve indoor air and surface hygiene when our children and community need it most.

SchoolSafe Agenda

PHASE 1

Identify the Problems

PHASE 2

Increase Indoor Air Quality and
Implement Infection control solutions

PHASE 3

Develop monitoring tools for the
staff to ensure system compliance

PHASE 4

Construct Cost/Benefit Analysis

Our Approach

Trinks Consulting Group recognizes that there are no silver bullets in the world of infection control. We know the problem is complicated and will require multiple solutions.

Let us attack this problem for you by

- Using a systematic layered approach focused on proven methods of microbe transmission and transference.
- Instituting disruptive antimicrobial technologies to alleviate costs.

Methods of Transmission



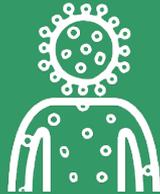
From Surfaces
Touch Contamination



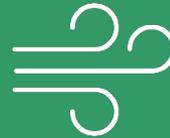
From Textiles
Spore Capture / Bacteria



Faulty Hygiene
Hand Washing



**Exposure from
Other People**
Outside Sources



Air
Vectors/ Air System Handling

Schools are the key facilities for transmitting microbes throughout our communities

The *toxic* combination:

low humidity + “Super-Emitter” children + toilet flush aerosolization = flu outbreak

Low humidity ensures that airborne viruses will stay aloft and travel far

Most schools were designed to extend the life of HVAC systems, NOT to protect students and staff from particulates

Schools and Influenza Virus Transmission:

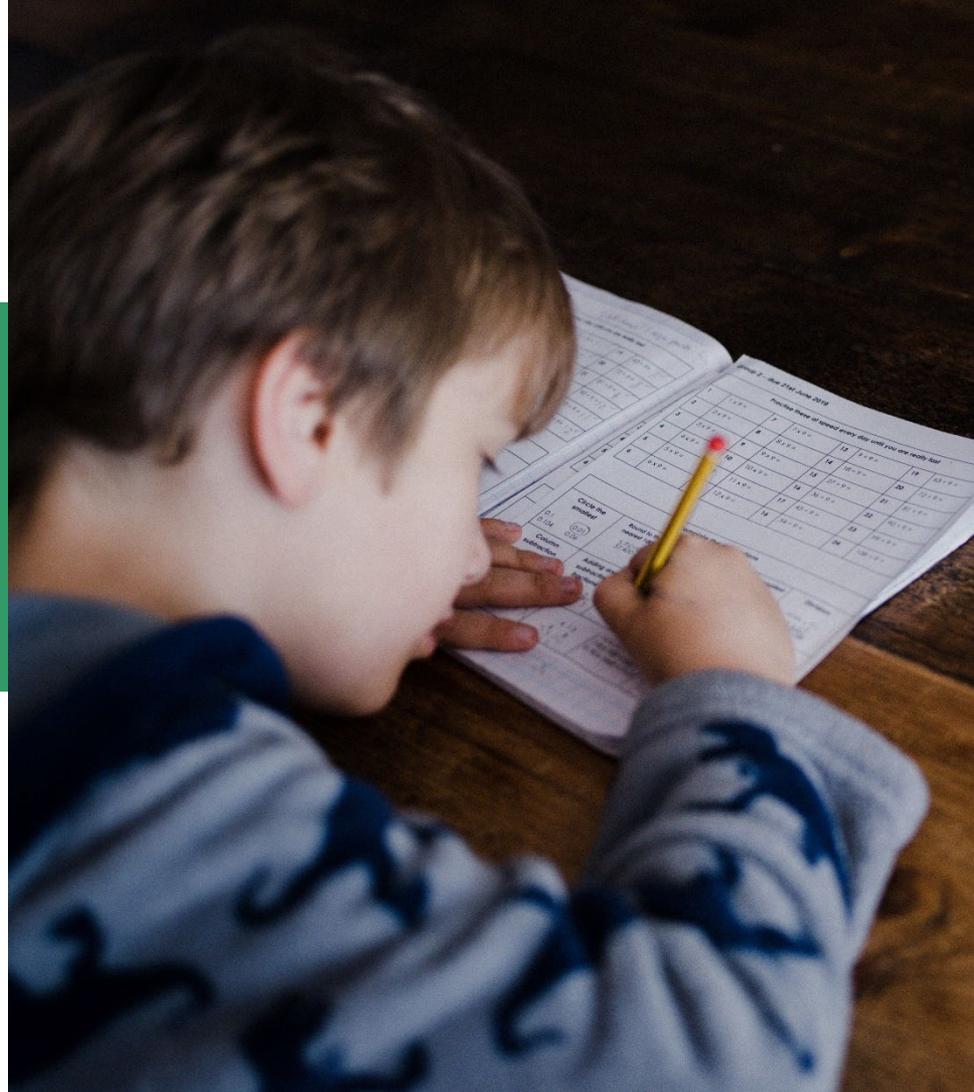
- Children possess immature immune systems, and thus may become “Super-Emitters” **capable of infecting 60+ classmates.**
- Many schools have dry environments consisting of 15-25% indoor relative humidity levels. This is the **perfect environment for airborne Viral transmission** and contagion.
- Few schools in the U.S. recognize the importance of **Indoor Air Quality (I.A.Q.) Standards** and the effects it has on Students and Staff.
- Most bathroom designs do not incorporate **floor level exhaust vents.**

Student Transmission in Facilities

"Increases in school absenteeism mark the beginning of a new epidemic, suggesting that school-age children play a critical role in disseminating influenza viruses. Increases in school absenteeism are typically followed by increases in work absenteeism." –Virologist Peter Wright¹

Schools now have many good reasons to take a vested interest in advocating for clean and properly humidified air in their buildings.

1. Professor Pediatrics, Pathology, Microbiology and Immunology Chief, Division of Pediatric Infectious Diseases Vanderbilt University School of Medicine



BioProtect 500™ Technology

- Effective against mold, fungus, algae and microbes *Independent testing shows efficacy against influenza and enveloped viruses. (COVID 19)*
- Organic, non-toxic, non-leaching
- Water based molecule
- Persistently kills organisms for up to 90 days once applied, kills mechanically instead of chemically
- EPA approved for porous & non-porous surfaces
- Works on textiles
- A Silicone Quaternary Ammonium Salt. (Organo-Silane Molecule)
- NSF Direct Food and Pet Contact Approval

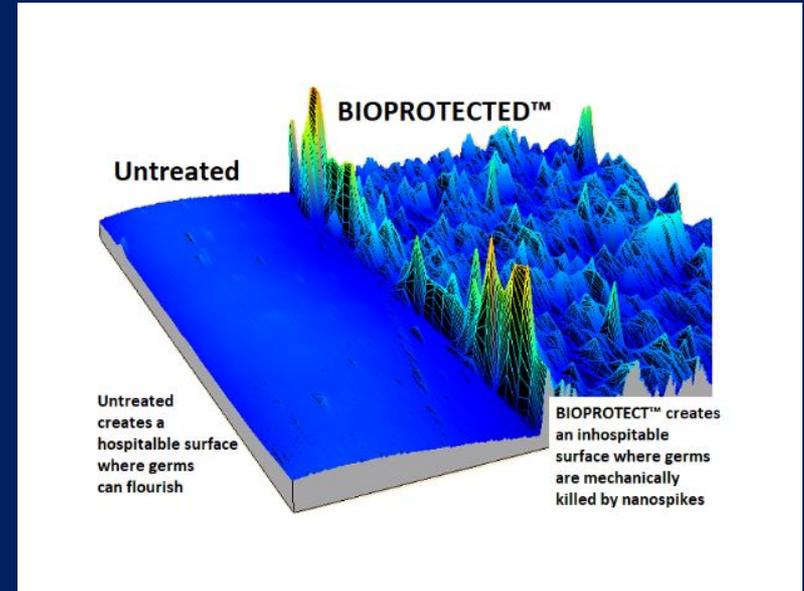


Image from ViaClean Technologies.

When applied to a surface or incorporated into a material, BIOPROTECT™ forms a covalent bond with the substrate and creates a microbiostatic antimicrobial protective layer, making it unreceptive to microorganisms. The coating forms a nano-bed shield of spikes (self-assembling monolayer), each of which carry a positive charge that attracts the negatively charged microorganism. Once attracted, the molecular spikes pierce the cell and rupture its cell membrane, causing the microorganism to die.



BioProtect™

6 Hour Hand Sanitizer

- BioProtect™ non-alcohol based, foaming hand sanitizer with FDA approved longevity claim for protection for 6 hrs.
- Studies show HAI reductions from 20 to 40% using BioProtect™ technology.
- Child Safe and works continually throughout the school day.
- Benzalkonium Chloride / Aloe formulation, non sticky, non greasy with no odor.
- Product allows for handling of small items which are surface sanitized by the residual product on the hands.
- Hands may be washed and treated with other sanitizers and will not interfere with the persistent action.

Surface Antimicrobials

Chlorine Dioxide Solution

Chlorine Dioxide - Off Gassing Tablets

Hypochlorous Acid- Disinfectant

- CL02 is an All purpose, hospital grade, multi-surface cleaner, broad spectrum disinfectants/biocides
- Off Gassing Tablets require no labor – simply place the tablet in the appropriate container of water
- Chlorine Dioxide is the CDC's recommended product for disinfection of PPE vs Ebola
- Hypochlorous Acid is made naturally by white blood cells in all mammals for healing and protection.
- HOCl is a powerful oxidant that is effective against invading bacteria, fungi, and viruses.

Label Claims Bacteria and Fungi

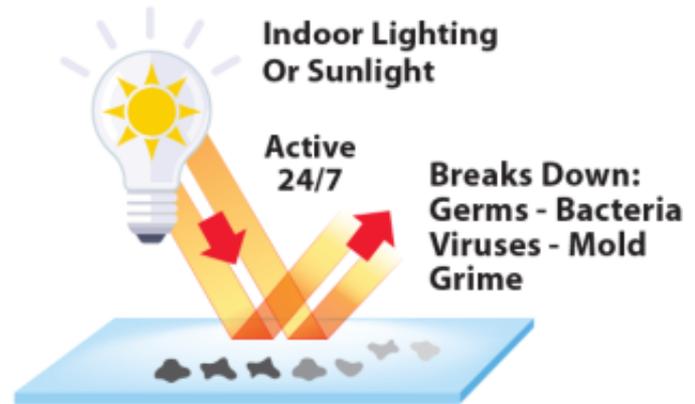
- Salmonella enterica
- Escherichia coli
- MRSA
- Salmonella enterica
- Acinetobacter baumannii
- Staphylococcus aureus
- Legionella pneumophila
- Aspergillus niger
- Enterobacter aerogenes
- Listeria monocytogenes

Label Claims Viruses

- HIV-I
- Norovirus (feline calicivirus surrogate)
- Respiratory syncytial virus
- Rotavirus
- H1N1 flu virus
- H5N1 flu virus
- Hepatitis B
- Hepatitis C

Simix Antimicrobial Technology

- Simix™ provides a High pH Gradient making surfaces inhospitable to microbes, additionally it also contains Sustainable Photocatalytic Oxidation Technology. This system (S.P.O.T. -ON) contains titanium dioxide inside the Simix™ Coatings, Cleaner and Degreaser. Titanium dioxide is a safe, naturally occurring compound that reflects natural and artificial light. As that light is reflected, it converts water in the surrounding air into hydrogen peroxide, which breaks down bacteria, viruses, germs, mold, grime and stains and creates a constant cleaning barrier surrounding the treated surface.



**Simix and light break down
viruses and bacteria**

**Liquid Cleaners and
Disinfectants Leave
Behind Biofilm**

Simix Cleaner

Detergent

*Dissolves the
lipid membrane*

Hydrogen Peroxide

Destroys viral structure

High pH

*Hostile to viral and
microbial growth*

**Biofilm is a Hideout for Viruses
and a Food Source for Microbes**

**Simix Removes and Prevents
Biofilm Build-up**



SIMIX™ Floor Treatment

- Provides a Nano Technology Surface Treatment rendering flooring surfaces antimicrobial.
- Easy to use. (Two people can apply 10,000 sq ft in approximately two hours)
- Dramatic labor cost savings over conventional floor treatments.
- Since the Nano-Technology forms a “glass-like” composite, and is not a wax, it is much less slippery
- Maintenance is as easy as periodic swabbing with a ph neutral cleansing agent.
- Adjunctive to increased air quality: eliminating bio burdens.





LS 420 Textile Technology

- Turns textiles antimicrobial
- Organic product non-toxic (water-based molecule) laundry softener for clothing, uniforms and textiles (table-cloths).
- Add ½ oz to an average laundry load (15lbs) during the rinse cycle to turn garments antimicrobial and slightly hydrophobic.
- Extends garment / uniform life as bacteria feed off dead skin cells imbedded within the clothing fibers.
- Exceptional odor control.
- Effective against a host of microbes

High Quality Microfiber

- Physically removes 85% of grime, dust and Micro-organisms
- Lint Free- lessens particulates produced from paper towels
- Multicolor to identify use area (Bathroom vs Kitchen Applications) helps limit cross contamination
- Aides in achieving "Dwell Time"
- Provides an electrostatic charge to "attract" debris
- Reduces waste



Netherlands Applied Scientific Research Organization confirmed that Greenspeed® Original microfiber cloth dampened with only water removes dirt faster and more effectively than a traditional cloth moistened with a detergent.

Indoor Air Quality Approach

We understand that removing overall particulates and bio-burdens found in confined spaces leads to requisite decreases in associated cleaning costs, student and staff absenteeism along with decreased risk of microbial air-borne contamination and exposure to pathogenic organisms.



Air - Sanders™

Particulate Containment Filter

How do we keep particulates from initially entering the HVAC system?

We add a preventative barrier:

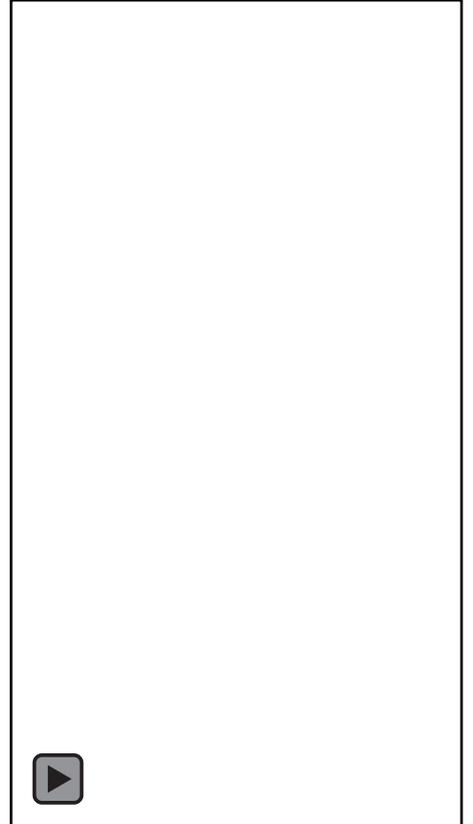
A new synthetic media has been developed that has efficiencies to provide submicron (MERV 15+) quality levels. (99.95% @ .3 micron.)

The main advantage to this media is that, unlike current hard sided micro fine glass H.E.P.A. filter technologies, it is a soft, flexible pad with very low static pressure.

This filter media can be utilized on virtually all existing HVAC systems without the need for costly retrofit.

Air – Particulate Containment Filter

- Each cough, sneeze can produce over 1 million air-borne vector particles per incident
- Only submicron filtration with high single pass of air capture rates are considered effective on particulates of this size.
- Many of these pathogens are simply drawn into the HVAC system that acts as a dispersal mechanism.
- School system filtration for heating, ventilation , and air conditioning systems were designed primarily for the purpose of protecting the heating coil from dirt, not transmission of contaminants.



Air – Particulate Containment Filter

- This breakthrough in disruptive technology, allows for submicron @ 0.1 to 0.3micron size filtration of the return vents directly in the room and common areas of the building or at the main unit .
- The Particulate Containment Filter is installed and removed easily and requires no retrofit to the existing HVAC main system.
- Attaching this media, which can be **as simple as the use of double-sided tape.**
- This allows the preventive capture of submicron particles (0.1 microns and larger) that are about to enter the HVAC system, or at the main unit thereby drastically reducing the migration of organisms from one area of the facility to another.



Sanders™ Containment Media

- As a flat cut pad with no frame, it can be implemented rapidly to assure compliance standards are met within days not weeks, even when unconventional size requirements exist
- Limited installation training required.
- Air filtration scale-able to meet customer needs and budgets.
- Capable of working on independent air movers and HVAC systems.
- Protect students, employees and visitors from particles the size of known pathogens.
- Dramatically change air quality: single pass of air capture rate of particle sizes from 0.1 submicron size and up including dust and pollen.
- Normally utilized in conjunction with DYLOS™ laser particle monitors or cloud storage robotic monitoring equipment to identify and assure areas experiencing high particle counts are combatted and times of high environmental stress are identified, and sources can be alleviated.



Keep Students Safe

- Clean all Transport Vehicles with Microfiber
- Disinfect with Chlorine Dioxide Off-Gassing Tablets
- Protect with BioProtect™ Technology



SchoolSafe

Estimated Savings and Benefits per facility



SchoolSafe Summary



Lower Operating Costs

Cleaning, Staff Absenteeism, etc.



Better Attendance

Potentially more government reimbursement



Helps Ensure Safety

of students and staff



Environmentally Safe

Infection Control Program

BioProtect™

LS 420 Laundry Treatment

Simix™ Products

Sanders Filters

6 Hr Hand Sanitizer

Chlorine Dioxide

Hypochlorous Acid

Wello Wellness

