

TECHNICAL BULLETIN

March 8, 2020

Create a ‘Bio-Protected’ Environment & Guard Against Virus Pathogens with Organic Z BioScience Probiotic Biosurfactant Cleaners

General Questions

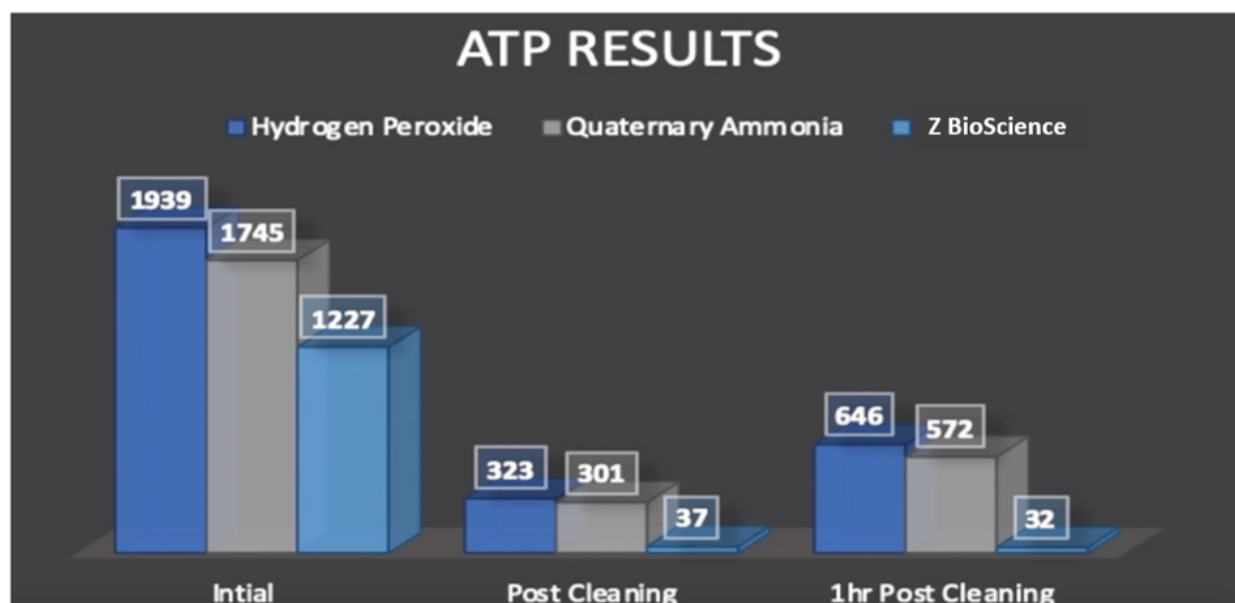
1. How do Z BioScience (ZBS) Probiotic Biosurfactant Cleaners work to remove soils and biological contaminants from surfaces?
 - Z BioScience Probiotic Biosurfactant Cleaners introduce ***a biological cleaning component in the form of safe, beneficial US FDA ‘GRAS’ schedule listed probiotic bacteria*** ...which overwhelm pathogens, depriving them of access to microscopic food sources, resulting in pathogen starvation and ultimately, ***dead pathogens***.
2. Is cleaning with ZBS Probiotic Biosurfactant cleaners ***safer*** than cleaning with commercial cleaning products and disinfectants? ***Yes, and here’s why-***
 - ***ZBS Probiotic Biosurfactant Cleaners are comprised of two core components:***
 - US EPA ‘Safer Choice’ delivery surfactants
 - US FDA ‘GRAS’ (Generally Regarded as Safe) schedule listed Probiotic Bacteria
 - ***ZBS Cleaning products are also:***
 - pH Neutral and non-toxic
 - Safe for use in the presence of children, adults, animals & pets
 - CA Prop 65 Compliant
 - Safe for use on moisture tolerant surfaces
 - Suitable for disposal into municipal wastewater systems
 - Require no PPE for the person applying the products
 - Organically ***SUSTAINABLE***

The use of conventional chemistry-only cleaners is ***not Sustainable***. Caustic Sanitizers and Disinfectants destroy ***both*** beneficial Probiotic Bacteria and harmful Pathogen Bacteria, each time they are applied, which is neither ***Sustainable nor Eco-Friendly***.

Critical Performance Qualities	Non-Sustainable	Sustainable
	Chemistry-Only Cleaners & Disinfectants	Z BioScience Probiotic Cleaners
Cleaning & Protects Surfaces ⁽¹⁾	NO	YES
Ongoing Odor Elimination ⁽²⁾	NO	YES
Work When Dry and Wet ⁽³⁾	NO	YES
Extended Surface Protection (up to 3 days) ⁽⁴⁾	NO	YES
Safe to Use in Presence of People & Animals ⁽⁵⁾	NO	YES
Safe for Moisture Tolerant Surfaces (pH Neutral) ⁽⁶⁾	NO	YES
Environmentally Acceptable & Sustainable ⁽⁷⁾	NO	YES
Cleans to the Microscopic Level ⁽⁸⁾	NO	YES




3. Do surfaces cleaned with ZBS Probiotic Biosurfactant Cleaners stay cleaner than those cleaned with conventional caustic cleaners? ***Yes- ATP Tests are Proof Positive***

The chart below depicts a surface cleaned with three different products (two caustic, one organic). Note the ATP readings from each product, and the ‘***Extended Surface Protection***’ of the ZBS Probiotic Biosurfactant Cleaner. ZBS Probiotic Cleaners protect for up to 3 days.



ATP (Adenosine Triphosphate) is an energy molecule present in all living things. The measurement of ATP correlates how clean a surface is. Low ATP readings, reflect low soil and low contaminate levels residing on a surface. ATP is the only method that combines cumulative data with scientific measurement to deliver speedy and accurate test results. The USDA, in USDA Approved food processing plants, and ISSA, in their ‘K-12 Clean Schools Standards’ publication, use ATP testing as a means of measuring ‘CLEAN’.

Hygiena SurePlus Luminometer Readings EXAMPLE OF ONGOING CLEANING

Before Cleaning With ZBS Multi-Task (12:27 pm)	Immediately After Cleaning With ZBS Multi-Task - (12:29 pm)	36 Minutes After Cleaning With ZBS Multi-Task (1:05 pm)
		

This test was conducted on the desk-top surface in front of the keyboard to a computer workstation in a school's M&O depot, used by all M&O personnel to retrieve new and record completed work orders.

The work station was in constant use between the immediate post cleaning reading (25) and the next reading thirty-six minutes later (15) .

4. How can I learn more about the ZBS Cleaning product selection and how to use them?

- *Here is a short list of products for commercial cleaning purposes. Please contact us for assistance in selecting the best products for your specific use.*

Product name

Multi-Task Cleaner
Max Degreaser
EnviroMist Concentrate
Encapsulator Rug & Carpet
Floor & Carpet Cleaner
C+ Concentrate

Primary uses

General cleaning- Buildings & Buses
Grease & Oil Stain Emulsifier
Fogging Solution- Buildings & Buses
Carpet Encapsulation Cleaner
Carpet Extraction Cleaner
Exterior Foaming Cleaner

5. Here are some suggested cleaning protocols for ZBS products:

ZBS products can be applied without Personal Protective Equipment (PPE).

Interior Settings

Use **ZBS Multi-Task Cleaner** diluted at label rates, with cold or warm water for wet wiping and wet mopping surfaces. These cleaners require no dwell time. Wet wipe or mop and agitate surfaces with microfiber flat mops, or a long-handle medium-bristle brush to loosen soils. If needed, rinse with water and allow to dry. Wipe mirrors and glass as needed. Pour the excess soiled solution from mop buckets into drains and floor sinks to treat floor drain traps.

Hard, Flat Surfaces

Wet wiping and mopping- Floors, desks, lunch tables, benches, chairs, drinking fountains, vents, floor drains.

Vertical Surfaces

Walls, windows, mirrors, light switches, door hardware, wall vents

School Bus Interiors

Wiping of seats, seat backs, safety rails, windows , floors

Restroom Surfaces

Clean fixtures, partitions, grab bars, walls, floors, doors, dispensers, and trash receptacles, while eliminating pathogens and the odors they cause.

Multi-Purpose, Conference and Lunch Rooms

Clean lunchroom tables and benches, frames and hardware as needed. Clean 'wall cabinets' where tables and benches are stored in upright, folded position. Use Multi-Task Cleaner in your Auto Scrubber for cleaning vinyl and concrete floors.

To expedite cleaning lunch tables and benches in between lunch periods, consider using microfiber flat pocket mops, and a six (6) gallon rectangular 'finish bucket' to 'pre-soak' up to 10 microfiber mop heads. Clean tables and benches in half the time it takes with hand-held towels.

Use **ZBS Enviro Mist Microflora Fogging** and a Long Ray ULV Fogger or a Victory Electrostatic Sprayer to apply a beneficial layer of probiotic fog to interior surfaces. The microflora fog particulates are able to reach high, and hard-to-reach areas, leaving a coating of beneficial probiotic bacteria to guard against re-population of pathogens.

Cleaning Carpets and Area Rugs-

We recommend operating HVAC systems with clean filters while cleaning carpets.

At school sites equipped with the ***Moe-Cleaner Industrial- Low Moisture Encapsulation Carpet machine***, use ***ZBS Encapsulator Rug & Carpet Cleaner @ 2 oz. per gallon of water***, to remove soils and contaminants, and to lift carpet pile and traffic patterns from carpets and area rugs. Classroom carpets can be cleaned in 30 minutes, and are usually dry in less than 45 minutes, able to return to service.

The use of low-speed floor machines with cotton bonnet pads can be very effective in removing and collecting soils in carpets and rugs. Use 2 ounces of ZBS Floor & Carpet Cleaner in 1 gallon of warm water to spin 'bonnet clean' carpets. Use caution not to over-wet carpets, and rinse and rotate dirty bonnets regularly in clean solution to ensure soil removal.

At sites not equipped with Moe-Cleaner Industrial Carpet Machines, or Bonnet equipment, the use of upright vacuum cleaners with motorized 'beater bars', can be effective in loosening and removing surface soils and contaminants. It is essential that vacuum cleaners have clean foam filters, and new disposable filter bags for this exercise. Be certain to change filter bags often. ***Using vacuum cleaners not equipped with disposable filter bags is not recommended, as pathogen contaminants can become airborne, and present hazardous conditions when not collected and disposed of properly.***

Cleaning carpets with an upright vacuum cleaner and ZBS Encapsulator Cleaner- Mix ZBS Encapsulator @ 2 oz. per gallon of water in a manual pump sprayer. Apply the Encapsulator solution to carpet and area rugs in a fine mist. Allow 20 minutes for solution to dry and vacuum carpets and rugs to collect soils immediately.

Back-Pack Vacuums can also be used to conduct the above-mentioned cleaning exercise. Be certain to use a carpet floor tool w/brush for best results. Cleaning carpets with **ZBS Encapsulator Cleaner** and a vacuum cleaner is a 'Stopgap' method to extract the Encapsulator and the soils it traps. This method may not produce results equal to those of the Moe-Cleaner Industrial unit, or the bonnet method described here, but using vacuum cleaners to collect and reduce soil contaminants in carpets improves indoor conditions.

Exterior settings- Mix **ZBS C+ Cleaner** at label rates and apply using a hose-end sprayer/foam applicator to playground fixtures and outdoor tables as needed to remove soils. (C+ is also an excellent tool for foaming restrooms and shower rooms.) Allow 5-10 minutes to dwell, use a medium bristle brush to loosen soils while wet if needed. Rinse as needed and allow to air dry.

ZBS Multi-Task Cleaner, C+ Foaming Concentrate, Max Degreaser and EnviroMist Microflora Fogging Solution provide excellent cleaning and removal of contaminants down to the 'microbial level', leaving surfaces clean and reducing disease-causing pathogens.

Fogging with Safe, Beneficial Probiotic, Biosurfactant Bacteria using ZBS EnviroMist Microflora solution and ULV Foggers, or Electrostatic sprayers is important. Custodial staff can apply *EnviroMist* without the need for Personal Protective Equipment (PPE), and without concern for the contents of the room. No need to cover plants or pets, all is well with using *EnviroMist*. Unlike using other 'fogging or misting' agents containing caustics such as Ionized Hydrogen Peroxide, Children, toddlers and infants may safely and comfortably play and nap after fogging with *EnviroMist*, without the need to wet wipe toys, tables and furniture.

Applying *EnviroMist* with either of the above- named applicator tools provides interior spaces with a fortified layer of probiotic protection. This layer of biological protection against pathogens can be applied every 7-10 days for continued protection on common 'high-touch' points, as well as those 'hard-to-reach' areas. In Pre-School and Childcare Centers, small toys and learning tools can be very hard to clean, and are often not cleaned frequently.

ZBS HVAC System Cleaners –

HVAC coil, filter and equipment maintenance is critical in reducing the spread of biological contaminants. Using ZBS AC-C, or AC-X Probiotic Biosurfactant Coil cleaners, and AC-S Probiotic Protective Coil Spray will assist in provide ongoing occupant protection.

This Technical Bulletin is the first of several informational advisories on 'Cleaning for Health'. Please contact us by email if we can assist you further.