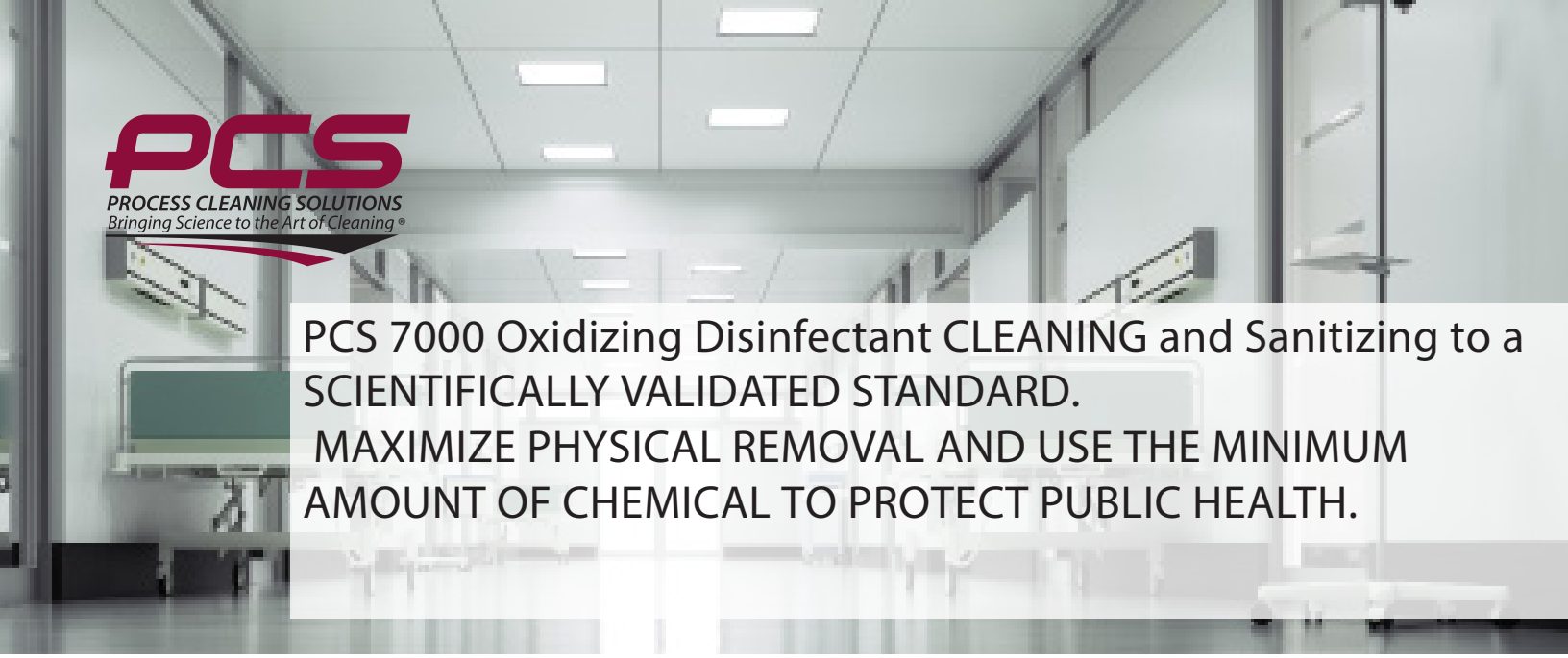
PROCESS CLEANING SOLUTIONS
Bringing Science to the Art of Cleaning®

PCS Hygienic Microfibre Cloths and PCS 7000 Oxidizing Cleaning and Sani□zing Without Spreading Bacteria, Viruses and Bacterial Spores



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PCS 7000 Oxidizing Disinfectant CLEANING and Sanitizing to a SCIENTIFICALLY VALIDATED STANDARD. MAXIMIZE PHYSICAL REMOVAL AND USE THE MINIMUM AMOUNT OF CHEMICAL TO PROTECT PUBLIC HEALTH.

WHO BENEFITS MOST FROM NEW PCS Hygienic Microfiber CLEANING ?

PCS Hygienic Microfibre Cleaning Process 1

All professional cleaning providers in schools, day care facilities, food service, long term care facilities and hospitals benefit from a cleaner environment.

1st - No requirement to launder microfbre cloths

2nd - Soaking and rinsing cloths In PCS 7000 sanitizing solution prevents cross contamination.
Change solution when soiled and when chlorine test strips indicate loss of active.

3rd - Double Dipping is allowed and recommended.

4th - Save thousands of dollars compared to microfibre cleaning without double dipping and laundering.

Estimated cost saving per ten full time employees each given 40 cloths per day cost per microfibre cloth laundering, transportation and replacement 30 cents per cloth.

- **Daily cost =**
  $0.30 x 40 cloths = $12.00 dollars x 10 employee's = **$120.00/day**
- **Monthly cost =**
  $0.30 x 40 cloths x 10 employee's x 30 days = **$3600.00/month**
- **Yearly cost =**
  $0.30 x 40 cloths x 10 employee's x 365 days = **$43,800/year**

PCS Hygienic Microfibre Cleaning Process 1

- **Daily cost PCS Hygienic Microfiber cloths =**
  $1.10 x 2 cloths per person x 10 employees = **$22.00/day**
- **Monthly cost** =
  $1.10 x 2 cloths per person x 10 employees x 30 days = **$ 660.00 month**
- **Yearly cost =**
  $1.10 x 2 cloths per person x 10 employees x 365 days = **$7920.00/ year**
- **Annual Savings =**
  $35,880 dollars per ten employees
  $43,800 - $7920 = $35,880

PCS Hygienic Microfbre Cleaning Process 2

Any institution using disinfecting wipes

CLEANING TO A SCIENTIFICALLY VALIDATED STANDARD.
MAXIMIZE PHYSICAL REMOVAL AND USE THE MINIMUM AMOUNT OF CHEMICAL TO PROTECT PUBLIC HEALTH

1st - Microfbre cloths have demonstrated the ability to clean more effectively than other cleaning cloths or disinfecting wipes.

2nd - Microfbre cloths have demonstrated the ability to remove greater than 99% of bacteria, viruses and bacterial spores from surfaces.

3rd - Cleaning to a Microbiological Standard of less than 2.5 colony forming units per square centimetre widely accepted in food processing industry often health care facilities fail to meet this standard.

4th - Disinfecting wipes do not clean well.
Better cleaning equals fewer outbreaks. The use of disinfectants potent enough to kill spores like C. difficile should be limited to outbreaks and discharge cleaning of special pathogens, they are no longer needed for everyday cleaning of the health care environment.

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PCS 7000 Oxidizing Disinfectant Cleaner Hygienic Cleaning and Sanitizing Process

Reusing PCS Hygienic Microfibre cloth

Dilute PCS 7000 Oxidizing Disinfectant with 32 parts water to approximately 200 ppm available chlorine in a bucket or opaque spray bottle. Diluted solution in a spray bottle remains effective for 30 days.

The combination of PCS Hygienic Microfibre cloths saturated in PCS 7000 at 200 ppm alkali sodium hypochlorite provides excellent surface cleaning. PCS Hygienic Microfibre cloth's unique 10 inch by 10 inch size allows easy removal of excess liquid from the cloth. Just squeeze excess liquid from the cloth before wiping surfaces to hygienically clean or sanitize food contact surfaces. Allow to air dry, no rinsing for food contact surfaces.

Reuse PCS Hygienic Microfibre cloth by rinsing cloth in 200 ppm solution, make up fresh solution when visibly soiled.

PCS 7000 when diluted to 200 ppm sodium hypochlorite continually decontaminates PCS Hygienic Microfibre cloths.

The efficacy of a simulated tunnel washer process on removal and destruction of Chloridoids difficile spores from healthcare textiles.

Suspension test conclusions: Sodium Hypochlorite kills C. difficile spore form with an 8-minute soak in 200ppm of sodium hypochlorite.

Efficacy of Peracetic Acid and Sodium Hypochlorite against SARS-CoV-2 on Contaminated Surfaces

Center for Food Safety, Department of Food Science and Technology, University of Georgia, Griffin, Georgia, USA Results Suspension test

In the presence of soil load, increasing the concentration of NaOCl from 5 to 200 ppm significantly increased the inactivation of the virus to a 5.2 log. Furthermore, at 200 ppm NaOCl, soil load did not significantly affect NaOCl virucidal activity compared to no soil load (Fig. 1A).

Using dampened PCS Hygienic Microfibre cloth to apply PCS Oxidizing Disinfectant Cleaners.

- Remove PCS Hygienic microfibre cloth from cleaning and sanitizing solution.
- Squeeze cloth to remove liquid so cloth is only damp.
- Take PCS Oxidizing Disinfectant Cleaner container with flip top and add 10 mls to cloth.
- Apply to surfaces following your institution's procedures.
- Repeat the process with a clean dampened PCS Hygienic Microfibre cloth in critical care applications.

Process Cleaning Solutions is a Canadian corporation manufacturing our products in Canada. PCS 7000 Oxidizing Disinfectant Cleaner is also approved by the US EPA, and appears on the EPA K list. PCS 5000, PCS 1000 Plus and soon PCS Hypochlorous Oxidizing Disinfectant cleaners are available in Canada only.

PCS 7000 Oxidizing Disinfectant Cleaner when used at no rinse sanitizing and cleaning solution with PCS Hygienic Microfibre cloths increases friction and the amount of organic soils removed. Controlled moisture cleaning reduces pathogen transfer .

PCS 7000 Oxidizing Cleaning with PCS Hygienic Microfibre cloths helps to prevent dry surface biofilms from forming.

PCS MICROFIBRE CLOTH CLEANING AND SANITATION WITH CONTROLLED MOISTURE SATURATION

MICROFIBRE CLOTHS CAN REMOVE LARGE NUMBERS OF PATHOGENS

Removal and Transfer of Viruses on Food Contact Surfaces by Cleaning Cloths (1)

Kristen E. Gibson, Philip G. Crandall, and Steven C. Ricke

"The microfibre cloth evaluated in our study had a mean log10 reduction of 3.36 for viruses when used as a damp cloth on both surface types"

"Microfibre cloths also demonstrated significantly less transfer of viruses to surfaces than non-woven fabric ."

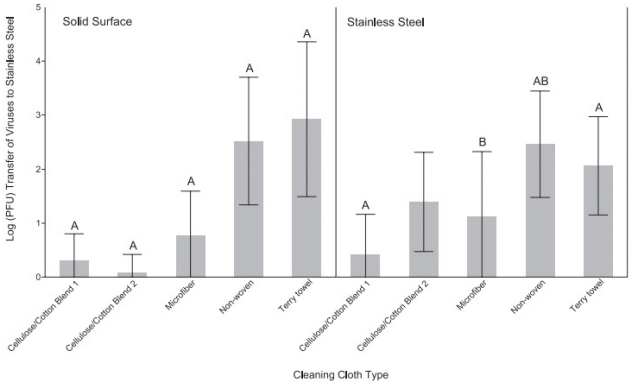

FIG 2 Total virus (FCV, MS2, PRD1) transfer to solid surface and stainless steel by cleaning cloths. Error bars indicate standard deviations. Letters above the bars represent statistically significant differences ($P \leq 0.05$) between cloth types for virus transfer within each surface type.

Bacteria from surfaces (2)

Assessing the efficacy of different microfibre cloths at removing surface micro-organisms associated with healthcare-associated infections

D.L. Smith , S. Gillanders b, J.T. Holah , C. Gush

"Overall results for the single use cloth trial indicated a mean log10 reduction of 2.21 in the number of micro-organisms on the surfaces following cleaning with the microfibre cloths"

"it is concluded that use of the microfibre cloths investigated is an effective way to reduce the levels of MRSA, E. coli and C. difficile (in spore form) on a range of surfaces found in the clinical environment and could therefore be of benefit to these environments."

" Effort should also be focused on ensuring that microfibre cloths are used correctly in real-life situations, through provision and application of manufacturers' instructions for use (where available) and staff training."

OVER RELIANCE ON DISINFECTANT WIPES

Ability of cleaning-disinfecting wipes to remove bacteria from medical device surfaces (3)

Elizabeth A. Gonzalez PhD *, Poulomi Nandy PhD, Anne D. Lucas PhD Victoria M. Hitchins PhD Division of Biology, Chemistry, and Material Sciences, Office of Science and Engineering Laboratories, Center for Devices and Radiological Health, Food and Drug Administration, Silver Spring, MD

Background: Nosocomial infections are a serious problem in health care facilities. Bacteria can be transferred from patient to patient via contaminated reusable medical devices and equipment.

Methods: An anesthesia machine and objects representative of smooth and ridged machine knobs were contaminated with Staphylococcus aureus, Bacillus atrophaeus spores, and Clostridium sporogenes spores. The ability of 5 commercially available cleaning-disinfecting wipes to remove bacteria was compared with gauze soaked with water or bleach. Gauze soaked with water was used to determine the optimal wetness for bacteria removal, which was then used to evaluate the efficacy of the wipe ingredients.

Results: All of the wipes cleaned the device surfaces significantly better than the no wipe control. Some wipes performed equally well as gauze with water, whereas others performed worse. Overall, the wipe containing sodium hypochlorite was the most effective at removing bacteria.

Conclusion: Physically removing bacteria from device surfaces with water was often as effective as the cleaning-disinfecting wipes.

PCS process of adding a precise repeatable amount of liquid to microfibre cloths at point of use insures fresh active ingredient to each cloth and maximizes micro fibre cloth soil removal.

PCS 7000 Oxidizing Disinfecting Cleaner diluted with 32 parts water demonstrated a greater than 7 log reduction of Escherichia coli and Staphylococcus aureus in 30 seconds.

Germicidal and Detergent Sanitizing Action of Disinfectants. Approved no rinse sanitization of food contact surfaces.

Major benefits.

- Cleans better than using disinfecting wipes.
- Easy to use process that saves time.
- Reduction in staff chemical exposures.
- Less chemical residue left on surfaces treated.
- Save up to 75% on your supply cost as compared to using disinfecting wipes.
- Cleaning to a level required to protect public health.

PCS 7000 Oxidizing Disinfectant Cleaner also kills C difficile spore form when used undiluted, ideally suited for outbreak, discharge and deep cleaning when required.

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PCS 7000 Oxidizing Disinfectant/Disinfectant Cleaner

DIN: 02314878

Use to kill or inactivate spores of C. difficile in settings where contamination by fecal matter is likely.

USE FOR SANITIZATION OF NON-POROUS FOOD CONTACT SURFACES

Demonstrated a greater than 7 log reduction of Escherichia coli and Staphylococcus aureus in 30 seconds. Allow to air dry without a rinsing step.

Use for no-rinse surface cleaning of frequently touched surfaces and for oxidizing organic soils from cleaning cloths.

For use on hard non-porous environmental surfaces in health care facilities, institutions, schools and hospitality industries, where organic soils may be present.

Kills Bacteria (Bactericide), Kills Pseudomonas aeruginosa, Salmonella enterica and Staphylococcus aureus.

Kills Clostridium difficile* (spores) in five minutes.
Guarantee 0.70 % Sodium Hypochlorite when packed.

Why clean with PCS 7000 Disinfectant Cleaner?

Health Canada approved label requires a pre-cleaning step using PCS 7000 Disinfectant Cleaner.

Special Instructions for Cleaning Prior to Disinfection against Clostridium Difficile Spores*

Personal Protection: Wear appropriate barrier protection such as gloves, gowns, masks and eye covering.

Cleaning Procedure: Fecal matter/waste must be thoroughly cleaned from surfaces/objects before disinfection by application with a clean cloth, mop and/or sponge saturated with PCS 7000 Disinfectant Cleaner. Cleaning is to include vigorous wiping and/or scrubbing until all visible soil is removed. Special attention is needed for high touch surfaces. Surfaces in patient rooms are to be cleaned in an appropriate manner such as from right to left or left to right on horizontal surfaces and top to bottom on vertical surfaces to minimize spreading of the spores. Restrooms are to be cleaned last. Do not reuse soiled cloths.

Infectious Materials Disposal: Materials used in the cleaning process that may contain feces/wastes are to be disposed of immediately in accordance with local regulations for infectious materials disposal.

Disinfection Procedure: Apply with a clean cloth, mop and/or sponge saturated with this product until surface is completely wet. Let stand for 5 minutes. Wipe with a clean damp cloth or paper towel or allow to air dry.

How to Clean with PCS 7000 Disinfectant Cleaner

Dilute 1 part PCS 7000 Disinfectant Cleaner to 32 parts water. Use to clean frequently touched surfaces prior to sanitizing or disinfecting.

- Ideally suited for use with microfibre cloths.
- Dilutes to approximately 200 parts per million of sodium hypochlorite which cleans and oxidizes organic soils.
- Leaves little or no visible residue on surfaces cleaned.
- Buffered sodium hypochlorite solution containing carbonates, salt and sodium hydroxide.
- No added perfumes or masking agents to disguise odour or synthetic detergent surfactants.
- Follow your institution's policy and procedures for cleaning and use of cleaning cloths.
- Can also be used as a no-rinse sanitizer on pre-cleaned non-porous food contact surfaces.
- Toilet bowl cleaning: Squirt undiluted onto pre-moistened acrylic bowl mop then apply to surfaces starting under the rim, then sides and then bottom of bowl.

SANITIZATION OF NON-POROUS FOOD CONTACT SURFACES

Rinse Method: Prepare a sanitizing solution by thoroughly mixing 1 part of this product with 32 parts of water to provide approximately 200 ppm available chlorine by weight.

Clean equipment surfaces in normal manner. Prior to use, rinse all surfaces thoroughly with the sanitizing solution, maintaining contact with the sanitizer for at least 30 seconds. Do not rinse equipment with water after treatment and do not soak equipment overnight.

Immersion Method: Prepare a sanitizing solution by thoroughly mixing 1 part of this product with 32 parts of water to provide approximately 200 ppm available chlorine by weight.

Clean equipment in the normal manner. Prior to use, immerse equipment in the sanitizing solution for at least 30 seconds and allow the sanitizer to drain. Do not rinse equipment with water after treatment.

DISINFECTION

To clean and disinfect walls, tables, countertops or other hard, non-porous surfaces:

- Remove gross soil prior to disinfecting surfaces.
- Apply undiluted with a clean mop, cloth or sponge to pre-cleaned surfaces. (When applying with a saturated cloth or sponge, gloves should be worn.)
- Completely wet surface and keep wet for 5 minutes.
- Wipe with a clean, damp cloth or paper towel or allow to air dry.
- Rinse with potable water surfaces that come in contact with food and surfaces or objects that come in contact with children at the mouthing stage of development. For all other surfaces, no rinsing is required.

To Disinfect Non-Critical, Pre-Cleaned Instruments: Instruments must be thoroughly pre-cleaned to remove excess organic debris, rinsed, and rough dried. (Clean and rinse lumens of hollow instruments before filling with this product or before immersion. Immersion method: Using a soaking tray, immerse instruments into this product and let stand for **5 minutes to kill Clostridium difficile* (spores).**

Wipe with a clean, damp cloth or paper towel and allow to air dry.

This product is not to be used as a terminal sterilant/high level disinfectant on any surface or instrument that (1) is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body, or (2) contacts intact mucous membranes but which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body. This product may be used to pre-clean or decontaminate critical or semi-critical medical devices prior to sterilization or high level disinfection. ***Follow the Special Instructions for Cleaning Prior to Disinfection**

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PCS 7000 Disinfectant Cleaner

- Registered concentration of sodium hypochlorite 0.70% exceeds the 1 to 10 bleach solution with water recommended by public health officials.
- DIN registered kill claim for C. difficile spores in 5 minutes.
- PCS 7000 Disinfectant Cleaner is a stable formulation with a 36 month shelf life. Expiry date is clearly labeled on all packaging.
- Reduced residues left behind after application. Product contains no addition of perfumes, masking agents, synthetic detergent surfactants or silicates.
- PCS is based in best practice. Pre-cleaning is recomended.

#6030-6 • 6 x 946 mL w/ flip top
#6030-4 • 4 x 3.78 L closed loop for dispenser use
#6030-2 • 4 x 3.78 L open stock

Chlorine Test Strips
All consumers should consider using test strips when using sanitizing and disinfecting chemicals.

#5925-12
12 tubes of 100 strips
available chlorine 10 to 200 ppm
#5925-10K
100 strips per container
available chlorine 0 to 10,000 ppm

Microfibre cloths with controlled moisture saturation have repeatedly demonstrated the ability to remove bacteria, viruses and spores in greater numbers than non-woven wipes used in disinfecting wipes, cotton and other reusable cleaning cloths, as well as microfibre cloths with uncontrolled saturation.

New Available October 2023
PCS Hygienic Microfibre cloths use with Diluted 200 ppm solution of PCS 7000 Oxidizing Disinfectant Cleaner to add friction to remove organic soils.

Use to decontaminate cloths during and after use.
10-inch x 10 inch 18 grams per cloth 6 x 50: 300 cs
MF300- Blue, MF300- Green, MF300 -Yellow
MF300 – Pink Cost effective and durable

Controlled Moisture Cleaning With PCS Hygienic Microfibre Cloths.
Remove cloth from PCS 7000 Claening and sanitizing solution.
Squeeze excess liquid from cloth.
Wipe frequently touched surfaces with damp cloth to remove soil and prevent transferring pathogens to clean surfaces.

Portable Dispensers

#12597 PCS Portable Dispenser 1:32

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PATIENTS' SINK POTENTIAL SOURCES OF INFECTION

Increased awareness of sink drain contamination as a possible source of transmission of hospital-acquired infections, particularly for high-risk patients.

Molecular epidemiology of Pseudomonas aeruginosa in an intensive care unit - Cambridge University Press

The mechanism of strain transmission from sinks to hands during hand washing was investigated in a children's hospital. When P. aeruginosa was present at densities of > 105/c.f.u. per ml in sink drains, hand washing resulted in hand contamination with P. aeruginosa via aerosol generation in the majority of experiments or P. aeruginosa was detected using an air sampler above the washing basin. High P. aeruginosa cfu were present at 4.30 h in the eight sinks (5 4 x 105-7- 0 x 1010 c.f.u./ml), whereas at 13.00 h P. aeruginosa c.f.u. were significantly lower (3A1 x 102-8.0 x 105 c.f.u./ml). These data reveal that the danger of bacterial contamination of hands during hand washing is highest in the morning.

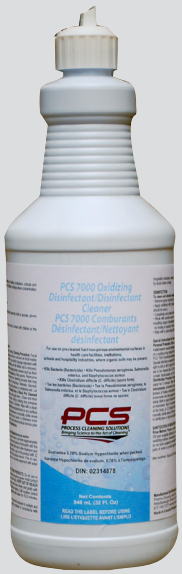
The identified transmission routes demand more effective hygienic measures in hospital settings particularly concerning personnel hands and sink drains.

PCS preventative maintenance of patient care sink drains in areas housing patients of high risk of acquiring hospital acquired infections.

When an outbreak has occurred and sink drains are suspected as source a deep cleaning may be required.

Daily treatment procedure

- Turn off automatic water activation.
- Clean sink and taps.
- As last step Squirt 60 mls / 2 ounces of PCS 7000 Oxidizing disinfectant around drain daily. Wipe excess PCS 7000 from sink and wipe accessible areas of drain.
- Allow PCS 7000 to rest in drain trap without rinsing to oxidize contamination.



All drains are contaminated with bacterial biofilms. A thorough clean must include dissolving of soil, agitation to dislodge attached biofilm bacteria and a sanitization step.

We recommend removal of trap from drain by a plumber or maintenance staff.

Deep cleaning process

- Dilute one scoop of EPS First Step cleaner in four liters of warm water. Apply diluted solution of EPS First Step cleaner to all drain components leading to sink and the trap keeping them wet for at least three minutes.
- Agitate all surfaces with brush until all visible soil is removed.
- Rinse all drain surfaces.
- Apply diluted solution of PCS 7000.
- Allow drain surfaces to air dry and reattach trap.
- Swabbing drain components before reassembly can validate process has been successful.

PCS 7000 Oxidizing Disinfectant contains 7000 ppm of sodium hypochlorite kills C difficile spores and when diluted with 32 parts water demonstrated a greater than 7 log reduction of Escherichia coli and Staphylococcus aureus in 30 seconds.

EPS First Step Cleaner dissolves and loosens soil including EPS Extracellular Polymeric Substance bacteria use to attach to surfaces. Contains carbonates and sodium citrate

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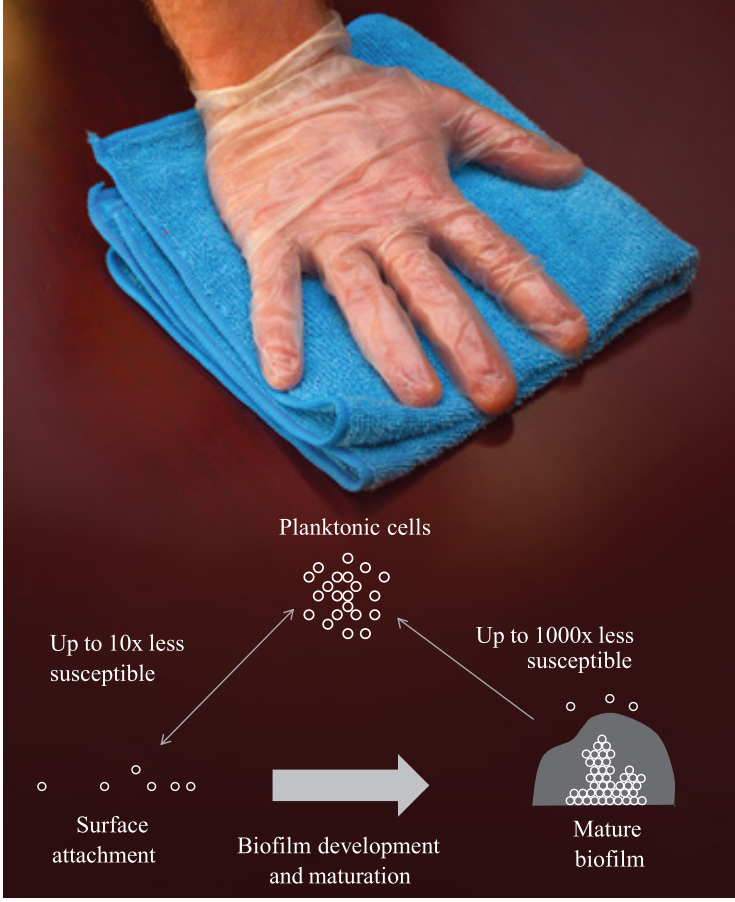
Biofilms are forming on many dry hospital surfaces because they aren't cleaned frequently or effectively enough.

The bacteria have a chance to attach and excrete extracellular organic substances, or slime, which makes them more resistant to removal and tolerant to disinfectants.

Process used by bacteria to form biofilms on dry surfaces

- Individual bacterial cells land on a surface.
- Some attach to surface, and may be aided by organic chemical or soil residues.
- Attached bacteria release extracellular organic substances which allow additional mixed bacteria to adhere to the colony being formed.
- Biofilm bacterial communities shed bacteria back into the environment
- Once the bacterial community has matured the bacterial population is protected from cleaning processes and biocides.



PCS OFFERS TWO OPTIONS TO ADDRESS ACCUMULATED FIXED ORGANIC SOILS FROM SURFACES.

1 - PCS Prevention Process

Frequent cleaning with PCS Hygienic microfibre cloths and PCS 7000 Oxidizing Disinfectant/Disinfectant Cleaner diluted to the cleaning and sanitizing solution of 200 ppm of sodium hypochlorite.

Frequently damp wiping surfaces with this process keeps organic soils oxidized and our microfibre cloths add the friction needed to remove and prevent organic soils from accumulating.

PCS 7000 cleaning and sanitizing solution has demonstrated a greater than 7 log reduction in Staphylococcus aureus and Escherichia coli in 30 seconds (Germicidal and Detergent Sanitizing Action of Disinfectants). Approved and recommended for no rinse sanitization of pre cleaned direct food contact surfaces.

Unlike detergents and disinfecting detergents PCS 7000 contains no organic substances that microbes could consume the residues as a nutrient source.

- ✔ PCS Hygienic microfibre cloths in a solution containing 200 ppm of PCS 7000 Oxidizing Disinfectant Cleaner.
- ✔ Squeeze excess liquid from cloth then double wipe surfaces applying pressure to maximize removal of soil.
- ✔ Oxidizing cleaning to prevent dry surface biofilms.

2 - PCS Deep Cleaning Process

For added efficacy during persistent outbreaks and to oxidize and remove accumulated organic soils. Organic soils or mature biofilms resist cleaning and disinfecting and there is evidence bacteria lodged within biofilms can be up to 1000 times more resistant to disinfecting chemicals.

The Process

- ✔ Apply PCS 7000 Disinfectant Cleaner with PCS Disinfectant Application cloths
- ✔ Keep surfaces wet for five minutes to kill C difficile spores and to oxidize accumulated organic soils.
- ✔ To prevent oxidized organic soils from reattaching wipe surfaces with a PCS microfibre cloth dampened in cleaning and sanitizing solution of 200 ppm of PCS 7000.

*Alternatively PCS 7000 can be applied undiluted to a pre dampened PCS microfibre cloth.

There is evidence concentrations of sodium hypochlorite can oxidize biofilms matrix therefore adding a damp wiping step after disinfection will improve the removal of organic soils.

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