PCS Hypochlorous Water

What are PCS Hypochlorous Water products?

PCS Hypochlorous Water products are a family of surface cleaners, *Wound Cleansing solutions and surface disinfectants that contain PCS proprietary stabilized Hypochlorous Water solutions*.

We create our Hypochlorous Water by diluting PCS concentrated stabilized sodium hypochlorite disinfectant with purified water to the desired concentration of sodium hypochlorite and add dilute solution of acetic acid to the **desired pH range 6 to 8.5** creating PCS Hypochlorous Acid.

"At environmental pH values (6.5-8.5) half of the hypochlorite is in the undissociated form of hypochlorous acid and half is dissociated to the hypochlorite anion. Only the hypochlorous acid fraction is volatile"

Hypochlorous acid in very low concentrations have proven effective against oral biofilm bacteria at concentrations of 5 ppm, 25 and 50 ppm have proven effective in food production sanitation against vegetative and biofilm bacteria even after one year storage, Mayo Clinic study reported Hypochlorous acid effectiveness on vegetative bacteria and same bacteria in biofilm form at the same hypochlorous acid concentration, H202 required up to 1000 times higher concentration to be effective against biofilm bacteria.

New study reports using a low concentration Hypochlorous acid cleaning or disinfecting products could have a secondary benefit of reducing viruses from indoor air by 99% within minutes of exposure to less than 0.2 ppm of Hypochlorous acid in the air, H2O2 required .9 ppm and twice the contact time. H202 and Hypochlorous acid have identical exposure limits in indoor air of 1 ppm. Study Link

PCS Hypochlorous Water

Surface Cleaning without Harming

PCS Hypochlorous Water Surface Cleaning Without Disturbing Dry Surface Biofilms
Our indoor Microbiome Includes Difficult to Remove Biofilms on Dry Surfaces

Dry Surface Biofilms are on most if not all surfaces indoors. A natural community of microorganisms that inhabit most if not all environments. If we stop attacking them with harsh cleaners and disinfectants biofilms can be and are a very beneficial part of our ecosystem.

PCS Hypochlorous Water surface cleaner is not hazardous under WHIMIS and requires no use of PPE's, is not corrosive to surfaces, ready to use solution has almost no detectable odour, will not stain clothes or require rinsing. Use PCS Hypochlorous Water to clean frequently touched surfaces, floors, walls, equipment, and most surfaces not damaged by water. PCS Hypochlorous Water routine surface cleaning without disinfecting to encourage dry surface biofilms to include beneficial bacterial populations.

Ready To Use Solution

Code	Description
6080-6	946ml x 6
6080-4	(Open stock) 3.78L x 4

Concentrate Dilute with 32 parts water

Code	Description
6081-6	946ml x 6
6081-2	(Closed loop) 3.78L x 2
6081-4	(Open Stock) 3.78L x 4

Brochures
PCS Hypochlorous Water
PCS Hypochlorous Water Program

Planktonic bacteria are more susceptible to antimicrobial chemicals
Keyboard are not cleaned well of often enough
Stability and Antibiofilm Efficiency of PCS Hypochlorous Water (Hypochlorous Acid)
PCS Hypochlorous Water + PCS Toraysee™ Program for Health Care
Biofilm-Associated Multi-Drug Resistance in Hospital-Acquired Infections

SDS
Ready-to-Use - English Concentrate - English

Creating PCS Hypochlorous Water
From PCS 1000 Plus #5906-6 or PCS 1000 Plus Diluted solution from SP9200-NPH-1000 dispenser

Add 50 mls of RTU or diluted dispenser solution to 946 ml opaque spray bottle filled with water leaving room for the addition of 50 mls of PCS 1000 plus

PROCESS CLEANING SOLUTIONS
Bringing Science to the Art of Cleaning®

Time to Switch to PCS Surface Cleaning Without Harming

Environmental Benefits of PCS Hypochlorous Acid Products

Study No.: PCS230215-CD-01

Assessment of the Combined Activity of Spraying Diluted PCS Hypochlorous Water and Wiping of PCS Microfiber Cloth for Cleaning Hard, Non-Porous Environmental Surfaces: Testing with *Clostridioides difficile* spores (ATCC 43598) as a Healthcare-Associated Pathogen

CREM CO
For a Safer Tomorrow

Quantitative carrier test – Tier 3 or QCT-3 (Zargar and Sattar, 2013

Assessment of the Combined Activity of Spraying Diluted PCS Hypochlorous Water and Wiping off PCS Microfiber Cloth for Cleaning Hard, Non-Porous Environmental Surfaces: Testing with Clostridioides difficile spores (ATCC 43598) as a Healthcare-Associated Pathogen.

Study No.: PCS230215-CD-01 **Study No.: PCS230215-SA-01**

Health Canada and US EPA are accepting two-step disinfectants with a pre-cleaning process. US EPA makes it mandatory for all types of disinfectant (one-step and two-step) to perform pre- cleaning if they are intended to be used against C. difficile spores.

If the pre-cleaning process is performed effectively, not only will it remove the soil from the surfaces but also, will remove the majority of microorganism and the leftover contaminations can be removed better with an effective disinfectant. In this study, the combined use of spraying and wiping using PCS microfiber cloth with a very mild cleaner (diluted PCS hypochlorous Water (50 ppm hypochlorous acid) will be assayed as a pre-cleaning process. Summary of the result: The spray and wiping method using diluted PCS Hypochlorous Water and PCS microfiber cloth could reduce the contamination by 92.80% and it just transferred 0.43% of the contamination to the clean surface. The results of this study showed that, under the test conditions specified, spray and wiping with diluted PCS Hypochlorous Water and PCS microfiber cloth efficiently cleaned the contaminated platform and significantly prevented the transfer of viable bacteria to the clean platform. Such a cleaning process is an effective pre- cleaning method which leaves less than ten percent of C. difficile spores on the surface for a disinfectant to inactivate.

Results From Previous Study

C. difficile spores
Average CFU per square centimetre

Product	Control CFU/cm2	After Wiping CFU/cm2	Transfer CFU/cm2	Percentage Transfer	Percent Reduction
1. Saline T - Detergent	15,150	3565	296	1.95	76.47
2. PCS 7000	9745	2.30	0.31	0.0032	99.976
3. PCS 250	741	3.44	2.33	.018	99.5
4. HP 1.4% Wipe	1150	14.3	15.3	1.33	98.7539
5. Q/A Wipe	664	263	161	24.25	60.39
6. PCS MicroClean	8290	468	118	1.82	89.4
7. MicroClean and PCS 250 Wiper	1930	104	14.7	0.9	93.95

*All surfaces were wiped twice with two separate cloths or wipes.

C. difficile spores inactivating/removing activity using PCS Toraysee™ cloth and HPW.

	CFU/cm2			Percent	
Product	Control	After Wiping	Transfer	Reduction	Transfer
PCS Toraysee™ cloth	7.67×10^6	0	0	100*	0*
HPW	6.67×10^5	~6.67×10^5	2.50×10^5	0**	37.5

Positive control Hydrogen Peroxide Wipe (HPW) single wipe following label instructions failed to remove C. difficile spores and transferred 37.5% to a previously uncontaminated platform.

	CFU/cm2			Percent	
Product	Control	Contaminated	Transfer	Reduction	Transfer
Test #1	7,178	526	31	92.80	0.43

These results demonstrate PCS Hypochlorous Water is an outstanding choice for greening health care cleaning, improving outcomes of subsequent application of disinfectants and reducing the excessive use of pesticides and disinfectants.

These results also demonstrate PCS Hypochlorous Water Spray Wipe Cleaning provides the confidence in removing surface disinfectants from routine cleaning in the non health care environment.