

Cleaning and disinfecting with Health Canada approved disinfectants allows for virus transfer.

PCS Specializes in the cleaning and disinfection of the health care environment.

Our research of cleaning and disinfecting processes led to the discovery that viruses are easily spread by wiping surfaces with pre moistened wipes or cloths soaked in disinfecting solutions.

It turns out viruses are shed in clusters containing many infectious viral particles that are transferred to adjacent surfaces when wiped.

Virus particles settle on environmental surfaces in clusters protected by body fluids. Double cleaning with disinfectants even with two separate pre-moistened wipes or cloths can transfer viruses to adjacent surfaces.

[Assessment of the Combined Activity of Wiping and Disinfection for Decontaminating Hard, Non-Porous Environmental Surfaces using the Murine Norovirus \(MNV\)](#)

Hydrogen peroxide disinfectant with claims for efficacy against non enveloped and enveloped viruses on the label . One wipe used for cleaning step second wipe applied as disinfectant following label instruction for disinfection.

Saline tee (Neutral Cleaner) moistened microfibre cloth used once to clean a second dampened microfibre cloth used for wipe of surface.

Neutral pH PCS 250 Oxidizing Disinfectant/Disinfectant Cleaner used with moistened microfibre cloths. One cloth used to clean second cloth used to disinfect.

Product	PFU/cm2			Percent	
	Control	After Wiping	Transfer	Reduction	Transfer
Saline T80	4,480.48	3.40	7.67	99.92	0.17
Saline T80	4,480.48	3.40	8.49	99.92	0.19
250 ppm test 1	3,894.07	3.82	9.34	99.90	0.24
250 ppm test 2	5,529.96	0.42	7.64	99.99	0.14
HPW	5,529.96	0.85	8.49	99.98	0.15

Table 1 shows the result of virus inactivating/removing activity of each sample test (PCS 250 and HPW) and control (SalineT80).

Product	PFU/cm2			Percent	
	Control	After Wiping	Transfer	Reduction	Transfer
Saline T80	4,480.48	3.40	8.08	99.92	0.18
250 ppm test 1	4,712.02	2.12	8.49	99.96	0.18
HPW	5,529.96	0.85	8.49	99.98	0.15

Table 2: The average of the two tests and reduction and transfer percent for virus inactivating/removing activity of each sample test (PCS 250 and HPW) and control (SalineT80)

CLEANING WITHOUT TRANSFERRING VIRUSES

PCS Apply and Dry cleaning results demonstrated significantly better removal of virus and prevention of transfer of virus to adjacent surfaces.

Applying Neutral pH PCS 250 Oxidizing Disinfectant/Disinfectant Cleaner and immediately drying surfaces with PCS microfibre cloth to prevent transfer of viruses to adjacent surfaces.

[Assessment of the Combined Activity of Spray and Wiping for Decontaminating Hard, Non-Porous Environmental Surfaces: Testing with Mouse Norovirus \(MNV\) as a representative Healthcare Associated Pathogen](#)

Product	PFU/cm2			Percent		Average Percent	
	Control	After Wiping	Transfer	Reduction	Transfer	Reduction	Transfer
Apply & Dry Test 1	4,333	0	0	100	0	100	0
Apply & Dry Test 2	18,386	0	0	100	0		

Table 1 shows the result of virus inactivating/removing activity of each sample test.
Table 1: virus inactivating/removing activity using Spray PCS200



PCS 250 Neutral pH Oxidizing Disinfectant

Dilution: PCS 250 was tested as Ready-to-Use (RTU), No dilution was required.

Test Organism Coronavirus 229E (ATCC VR-740) Exposure Time: No exposure time was considered. In the “Spray-Wipe” technique, the disks of each platform were transferred to neutralization solution immediately at the end of wiping. Soil Load: 5% Fetal bovine serum (FBS) in test microbial suspension.

1. Test Microorganism

Coronavirus 229E (ATCC VR-740): Coronavirus 229E (ATCC VR-740) is an enveloped virus in the genus Coronavirus. Members of this genus can cause acute respiratory infections such as SARS-1 and SARS-2 (19-nCoV). Unlike Coronavirus 229E, SARS-1, SARS-2 and Middle-East Respiratory Syndrome (MERS) virus require containment.

Human Respiratory Coronavirus 229E (ATCC- VR-740)							
Product	Total PFU per platform			Percent		Average Percent	
	Control	After Wiping	Transfer	Reduction	Transfer	Reduction	Transfer
Apply & Dry Test 1	13,778	0	0	100	0	100	0
Apply & Dry Test 2	127,777	0	0	100	0		

Hard surface disinfectants Health Canada is working with disinfectant manufacturers and industry associations to better inform Canadians of the products available for use to help against the spread of infections during the COVID-19 outbreak.

“Although they do not claim to kill viruses such as COVID-19, cleaners can play a role in helping limit the transfer of microorganisms.

For high-touch surfaces such as door handles, toys and phones, Health Canada recommends cleaning these often with either: regular household cleaners or diluted bleach prepared in accordance with the instructions on the label.

or in a ratio of 1 teaspoon (5 mL) per cup (250 mL) OR 4 teaspoons (20 mL) per litre (1000mL). This assumes bleach is 5 % sodium hypochlorite, to give a 0.1 % sodium hypochlorite solution“

[3/28/2020 Approved Hard Surface Disinfectants and Hand Sanitizers - Canada.ca](#)

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[NIH researchers discover highly infectious vehicle for transmission of viruses among humans](#)

