NSS Enterprises, Inc.

How Cleaning Floors Can Reduce the Transmission of Coronavirus

NSS Enterprises, Inc.
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Introduction

In a 2017 study published in the American Journal of Infection Control, researchers concluded "that floors in patient rooms were frequently contaminated with health care associated pathogens and demonstrated the potential for indirect transfer of pathogens to hands from fomites placed on the floor."[1] Moreover, "In a survey of 5 hospitals, [they] found that floors in patient rooms were frequently contaminated with health-care associated pathogens and it was not uncommon for high-touch objects… to be in direct contact with the floor." In light of the current COVID-19 outbreak, we have developed this guide to help you use your automatic scrubbers and disinfectants in an efficient and effective manner.


American Journal of Infection Control

Brief Report

Are hospital floors an underappreciated reservoir for transmission of health care–associated pathogens?

[1] Abishek Deshpande MD, PHD, Jennifer L. Cadnum BS, Dennis Fertelli BS, Bret Sitzlar BS, MPH, Priyeleela Thota MD, Thriveen S. Mana MS, MBA, Annette Jencson MT, CIC, Heba Alhmidi MD, Sreelatha Koganti MD, 2017, 'Are hospital floors an underappreciated reservoir for transmission of health-care associated pathogens?', *American Journal of Infection Control*, 45, 336-8. Link to Article

Cleaning vs. Disinfecting

According to the Centers for Disease Control and Prevention (CDC), these are the definitions of cleaning and disinfecting.

- Cleaning refers to the removal of dirt and impurities, including germs, from surfaces. Cleaning alone does not kill germs. But by removing the germs, it decreases their number and therefore any risk of spreading infection.
- Disinfecting works by using chemicals to kill germs on surfaces. This process does not necessarily clean dirty surfaces or remove germs. But killing germs remaining on a surface after cleaning further reduces any risk of spreading infection.

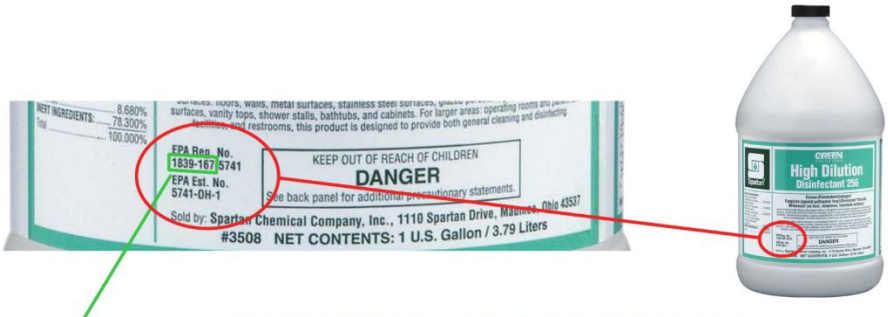
Cleaning and Disinfecting Floors Using an Automatic Scrubber

Step 1. Use disinfectants that are listed on the EPA's website that are designated for use against SARS-CoV-2, which causes COVID-19.

The list of approved chemicals can be found on the EPA's website at this link: https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2

It is important to know that EPA registration number listed on the chemical label may contain more digits than the number on the EPA website. If the first two parts of the number on the chemical label match the number on the EPA website, then the chemical is approved for use against SARS-CoV-2. See Figure 1 below as an example. In this example, the full EPA Registration number on the chemical label is 1839-167-5741. The EPA Registration number on the list of approved chemicals is 1839-167.

Figure 1. Compare the EPA Registration Number on the EPA website with a chemical label



List N: Products with Emerging Viral Pathogens AND Human Coronavirus claims for use against SARS-CoV-2

EPA Registration Number	Active Ingredient/s	Product Name	Company	Follow the disinfection directions and preparation for the following virus	Contact time (time surface should remain wet)	Formulation Type	Emerging Viral Pathogen Claim?	Date Added to List N
1677-256	Quaternary ammonium	FSC 35K	ECOLAB, INC.	Coronavirus	5 minutes	DILUTABLE	N	03/03/2020
1839-155	Quaternary ammonium	BTC 2125M 20% SOLUTION	STEPAN COMPANY	Coronavirus	10 minutes	DILUTABLE	N	03/03/2020
1839-165	Quaternary ammonium	BTC 885 NDC-128	STEPAN COMPANY	Coronavirus	10 minutes	DILUTABLE	N	03/03/2020
1839-167	Quaternary ammonium	BTC 885 NEUTRAL DISINFECTANT CLEANER-256	STEPAN COMPANY	Coronavirus	10 minutes	DILUTABLE	N	03/03/2020
1839-168	Quaternary ammonium	BTC 885 NDC-32	STEPAN COMPANY	Coronavirus	10 minutes	DILUTABLE	N	03/03/2020

Step 2. Read the label on the disinfectant you are using. Make sure to follow the correct dilution ratio on the label.

Disinfectants designed for use in automatic scrubbers have a dilution ratio that must be followed to ensure the right concentration of disinfectant. The tables below show the amount of disinfectant, in ounces, you should use with a full tank of clean water for NSS automatic scrubbers.

*Table 1. Disinfectant Amounts for Full Solution Tanks of NSS Scrubbers **(128:1 Dilution Ratio)***

Machine Model	Amount of disinfectant chemical to use
eForce Scrubber 26, 32	25 ounces
Champ 2929, 3329, or 3529	29 ounces
Champ 2417	17 ounces
Wrangler 2730/3330	30 ounces
Wrangler 2625	25 ounces
Wrangler 2616	16 ounces
Wrangler 2016	16 ounces
Wrangler 1710/2010	10 ounces
Wrangler 1503	3.7 ounces

*Table 2. Disinfectant Amounts for Full Solution Tanks of NSS Scrubbers **(256:1 Dilution Ratio)***

Machine Model	Amount of disinfectant chemical to use
eForce Scrubber 26, 32	12.5 ounces
Champ 2929, 3329, or 3529	14.5 ounces
Champ 2417	8.5 ounces
Wrangler 2730/3330	15 ounces
Wrangler 2625	12.5 ounces
Wrangler 2616	8 ounces
Wrangler 2016	8 ounces
Wrangler 1710/2010	5 ounces
Wrangler 1503	1.85 ounces

Step 3. Scrub with the disinfecting solution and allow it to dwell on the floor for the correct amount of time.

Scrub the floor with the automatic scrubber as you would for normal cleaning. Do not vacuum the solution as you scrub. Leave the solution on the floor for the amount of contact time indicated on the EPA website. See Figure 2 below. In this example, the contact time for EPA Registration Number 1839-167 is ten minutes.

Figure 2. Contact time listed on the EPA website

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1839-166	Quaternary ammonium	BTC 885 NDC-128	STEPAN COMPANY	Coronavirus	10 minutes	DILUTABLE	N	03/03/2020
1839-167	Quaternary ammonium	BTC 885 NEUTRAL DISINFECTANT CLEANER-256	STEPAN COMPANY	Coronavirus	10 minutes	DILUTABLE	N	03/03/2020
1839-168	Quaternary ammonium	BTC 885 NDC-32	STEPAN COMPANY	Coronavirus	10 minutes	DILUTABLE	N	03/03/2020

Step 4. Recover the disinfecting solution using your automatic scrubber

Recover the disinfecting solution using the automatic scrubber. When the recovery tank is full, dispose of the waste water and solution according to your local community standards.

Step 5. After you are done disinfecting, prepare your automatic scrubber for storage

Before storing the automatic scrubber, drain the solution and recovery tanks in accordance with your local community standards. Rinse both the solution and recovery tanks with clean water and empty them. Remove the lid from the recovery tank and allow it to air dry. Remove the squeegee from the machine, rinse it with clean water and allow it to air dry. Remove the pad drivers or brushes from the machine, rinse them with clean water and allow them to air dry.

Summary

The key steps you need to follow to disinfect floors using an automatic scrubber are:

1. Use an EPA registered disinfectant for SARS-CoV-2, which causes COVID-19.
2. Use the correct dilution ratio.
3. Scrub the floor with the disinfectant solution and wait the appropriate time.
4. Vacuum up the water from the floor and dispose of it.
5. Clean out your automatic scrubber and let it air dry after disinfecting the floor.

Need help?

NSS Enterprises has Regional Managers throughout the United States and Canada ready to help you improve your cleaning and disinfecting program. Click this link and enter your zip code to find your NSS Regional Manager. You can also call us at (800) 677-1663 or email us at info@nss.com and we will help you get what you need.