



Cruise Line Cleaning and Disinfection Protocol for Environmental Services / Housekeeping

This document has been developed in accordance with current applicable infection control and regulatory guidelines. It is intended for use as a guideline only. At no time should this document replace existing documents established by the facility unless written permission has been obtained from the responsible facility manager.

INFECTIOUS AGENT¹

NAME: *Norwalk virus*

SYNONYM OR CROSS REFERENCE: Acute viral gastroenteritis, Norwalk-like disease, epidemic viral gastroenteritis, acute infectious nonbacterial gastroenteritis, viral diarrhea, epidemic diarrhea and vomiting, winter vomiting disease, epidemic nausea and vomiting

CHARACTERISTICS: *Caliciviridae*; round, non-enveloped, 27-32 nm virion; single-stranded positive - sense RNA

HEALTH HAZARD

PATHOGENICITY: Abrupt onset of diarrhea, vomiting, non-bloody diarrhea and abdominal cramps; 25-50% of affected persons report myalgias, malaise, headache, nausea and low-grade fever; illness usually resolves within 24-48 hours; fatality is associated with electrolyte imbalance; symptoms can persist for up to several weeks; higher risk of symptomatic infection in individuals with preexisting levels of antigen-specific antibodies have been documented

EPIDEMIOLOGY: Worldwide and common; affects mainly older children and adults; frequent outbreaks in camps, schools, nursing homes, cruise ships and areas with contaminated drinking and swimming water; outbreaks are limited to 1-2 weeks

HOST RANGE: Humans

INFECTIOUS DOSE: Not known

MODE OF TRANSMISSION: Principally by fecal-oral route; other documented sources include water, food (particularly shellfish and salads), aerosol and fomites

INCUBATION PERIOD: From 10-60 hours; usually 24-48 hours

COMMUNICABILITY: Communicable during the acute stage of the disease; up to 48 hours after resolution of symptoms; presymptomatic shedding has been implicated in epidemiological studies

Preparation

Norwalk and Norwalk like viruses are highly contagious. Appropriate personal protection must be taken for those responsible for the decontamination of a room or area.

¹ Office of Laboratory Security, PPHB Health Canada



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Protective Barriers

1. Disposable gloves. Gloves should be changed as required, i.e., when torn, when hands become wet inside the glove.
2. Household gloves can be worn, but they must be discarded when the cleaning is complete.

Cleaning Supplies

Product: Multi Purpose Solution Concentrate (Virox 5) or Multi Purpose Cleaner wipes (Virox 5 wipes)

1. Preparation of solution - Pre-mix and label from a controlled location MPC Concentrate at a ratio of 1:128 for housekeeping duties.
2. Place mixed solution in either a labeled - flip top 1 Litre bottle or a small hand bucket.
3. MPC Wipes are ready to use.

Ratio	Per US Gallon	Per 4 Litres
1:16	8 oz	256 ml
1:64	2 oz	64 ml
1:128	1 oz	32 ml

Product Germicidal Efficacy

Virox 5 (MPC) is based upon Accelerated Hydrogen Peroxide – It has a Virucidal claim which includes Noroviruses (Feline Caliciviridae) and a bactericidal claim.

Procedures Summary

For cleaning and sanitizing (day to day), ensure a dilution of 1:128 and a surface contact time for 30 seconds. In the event of suspected Noroviruses, ensure that the MPC is diluted at 1:16 with a contact time of 5 minutes. If not using presaturated wipes it is recommended to change the cloth frequently. Place used cloth in a marked plastic-lined waste receptacle. Once room has been cleaned discard all unused cleaning solution. Wipe dry. No rinsing required.

Bathrooms within a room should be cleaned last.

Recommended Procedures for Housekeeping Activities Detailed Activity. Concentrates:

Note: diluted concentrate MPC 1:16 gives MEC (+0.4% active), 1:64 gives (0.15%). 1:64 is also proven effective against Noroviruses, however a Ready to Use at 0.5% or a 1:16 of the concentrate at 0.43% provides a greater degree of care and is very safe to use.

Areas / Surfaces	Ratio	Tools / Utensils	Procedures
Toilet Bowls	0.5%	Brush	<ol style="list-style-type: none"> 1. Pour solution inside surface of Toilet bowl. Leave on for 30 seconds. 2. Scrub with brush 3. Flush toilet



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Showers	0.5%	Spray Bottle Brush	<ol style="list-style-type: none"> 1. Spray surfaces of shower stall with solution 2. Use brush to scrub surfaces 3. Spray Shower curtain making sure to cover the seams 4. After 30 seconds, rinse all areas with water.
Hand washing sinks	0.5%	Spray bottle Clean Rag or Sponge	<ol style="list-style-type: none"> 1. Spray the surface of the sink and adjacent counter 2. Use clean rag or sponge to swipe surface clean. 3. After 30 seconds, rinse with water.
Bathrooms – routine maintenance	0.1% – Floors 0.5% Spray Wipe/Toilets	Mop and Bucket Spray bottle Clean rag or Sponge	<ol style="list-style-type: none"> 1. Spray .5% around the base of the toilet bowl. Leave on for 30 seconds, flush. 2. Spray .5% solution on walls of bathroom including doors and door handles. 3. Use clean rags or sponge to swipe the walls and doors to clean. 4. Make sure to swipe the door handles to clean. 5. Mop Floor with .1% solution. 6. Air dry, do not rinse.
Bathrooms when guest is sick (possible Norovirus- would be 5 minute contact time)	0.5%	Mop and Bucket Spray bottle Clean rag or Sponge	<ol style="list-style-type: none"> 1. Spray around the base of the toilet bowl using. Leave on for 30 seconds, flush. 2. Spray solution on walls of bathroom including doors and door handles. 3. Use clean rags or sponge to swipe the walls and doors to clean. 4. Make sure to swipe the door handles to clean. 5. Mop Floor with solution keep wet for 30 seconds. Change bucket solution and fresh water mop to remove excess solution. 6. Air dry, do not rinse.
Bedrooms – routine maintenance	0.5%	Spray bottle Clean rags or Sponge	<ol style="list-style-type: none"> 1. Spray solution onto rag or sponge until is wet. 2. Wipe wall surfaces. 3. Wipe Telephone hand set and TV remote 4. Wipe furniture surfaces 5. Wipe arms and backs of chairs 6. Wipe Life belts 7. Allow to air dry
Bedrooms – when guest is sick (possible norovirus would have a 5minute contact time)	0.5%	Directional Fogger Spray bottle Clean Rags or Sponge	<ol style="list-style-type: none"> 1. Spray solution onto rag or sponge until is wet. 2. Wipe wall surfaces including doors and door handles. 3. Wipe Telephone hand set and TV remote. 4. Wipe furniture surfaces. 5. Wipe arms and backs of chairs. 6. Fog Room with electric fogger. 7. Allow to air dry.
Hand Railings	0.5%	Spray bottle	<ol style="list-style-type: none"> 1. Spray solution onto rag or sponge until is



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		Rags or Sponge	wet. 2. Thoroughly swipe hand railings to clean. 3. Allow to air dry.
Door Handles	0.5%	Spray bottle Rags or Sponge	1. Spray solution into rag or sponge until is wet. 2. Thoroughly swipe door handles to clean. 3. Allow to air dry.
Gym	0.5%	Spray bottle Rags or Sponge	1. Spray solution on all surfaces of exercise apparatuses. 2. Wipe with Clean Rags or Sponge 3. Spray solution on Rags until wet. 4. Wipe all surfaces of free weights. 5. Spray solution on exercise mats. 6. Wipe with clean rags or sponge to clean 7. Allow to air dry.
Furniture	0.5%	Spray bottle Rags or Sponge	1. Spray solution on rags until wet. 2. Wipe Furniture 's surfaces 3. Allow to air dry
Chairs/Upholstery	0.5%	Spray bottle Rags or Sponge	1. Spray solution on rags or sponge. 2. Wipe chairs' armrest, seats and backs if wooden or hard surfaced. 3. Spray fine mist on armrest, seat and backs if cloth. 4. Allow to air dry.
Carpet	0.5%	Pressure Sprayer Spray bottle Rake- for large areas Brush-for small areas Wet Carpet cleaning machine with Wand.	1. Large areas: a. Spray carpet with solution with pressure sprayer. b. Rake surface of carpet to spread evenly. c. Allow 30 seconds of contact. d. Rinse with clean water in carpet cleaning machine using wand. 2. Small areas: a. Spray area of carpet with fine mist of product using spray bottle. b. Rake surface of carpet area. c. Allow to air dry.
Curtains	0.5%	Spray bottle Rags or Sponge	1. Spray fine mist of solution on curtains. 2. Allow to air dry.
Hard Floors	0.1%	Mop and Bucket	Fill bucket with solution. 1. Use clean mop to swipe floors clean. 2. Change the solution when dirty. 3. Allow to air dry.
Tables	0.5%	Spray bottle Rags or Sponge	1. Spray fine mist of solution on table surfaces. 2. Swipe with clean rags or sponge to clean surfaces. 3. Allow to air dry.
Counters	0.5%	Spray bottle Rags or Sponge	1. Spray counter with fine mist of solution. 2. Swipe with clean rags or sponge to clean surfaces. 3. Allow to air dry.



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Vomit	. 0.5%	Brush Scupper Spray Bottle Clean Rags	<p>Hard Surface</p> <ol style="list-style-type: none"> 1. The spill area must be cleaned of obvious organic material before the disinfecting step. Apply solution to spill wait 5 min. 2. After 5 min remove fluid capable of transmitting infection with disposable towels. Discard the towels in a plastic-lined waste receptacle. 3. After cleaning, reapply solution to spill areas and allow wet contact for at least 5 Minutes. Reapply solution to ensure a wet contact. Wipe dry and discard the cloth in a plastic-lined waste receptacle. <p>Carpeted areas</p> <ol style="list-style-type: none"> 1. The spill area must be cleaned of obvious organic material before the disinfecting step. Apply solution to spill wait 5 min. 2. After 5 min remove fluid capable of transmitting infection with disposable towels. Discard the towels in a plastic-lined waste receptacle 3. After cleaning, reapply solution to spill areas and allow wet contact for at least 5 Minutes Ensure deep saturation of solution into carpet 4. Rinse carpet using clean water: <ol style="list-style-type: none"> a. Pour water on carpet. b. Blot area with clean rag c. Repeat twice.
Body fluids	0.5%	Brush Scupper Spray Bottle Clean Rags	<p>Hard Surface</p> <ol style="list-style-type: none"> 4. The spill area must be cleaned of obvious organic material before the disinfecting step. Apply solution to spill wait 5 min. 5. After 5 min remove fluid capable of transmitting infection with disposable towels. Discard the towels in a plastic-lined waste receptacle. 6. After cleaning, reapply solution to spill areas and allow wet contact for at least 5 Minutes. Reapply solution to ensure a wet contact. Wipe dry and discard the cloth in a plastic-lined waste receptacle. <p>Carpeted areas</p> <ol style="list-style-type: none"> 5. The spill area must be cleaned of obvious organic material before the disinfecting step. Apply solution to spill wait 5 min. 6. After 5 min remove fluid capable of transmitting infection with disposable towels. Discard the towels in a plastic-



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			lined waste receptacle 7. After cleaning, reapply solution to spill areas and allow wet contact for at least 5 Minutes Ensure deep saturation of solution into carpet 8. Rinse carpet using clean water: a. Pour water on carpet. b. Blot area with clean rag a.
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Other application if needed in the event of an outbreak

Fogging with MPC (VACANT ROOMS):

Fogging is a supplemental method of sanitizing. The intent of fogging is to ensure that all vertical and horizontal surfaces are receiving MPC. Fogging is only effective if the surface is to remain wet for 10 minutes after the procedure.

Use the Fogmaster Tri-Jet 6208, General Purpose Fogger.

Use P.P.E. equipment, specifically, carbon filter full mask full respirator is to be worn by the person who is fogging. When fogging a room, it is best to use an extension cord and plug the fogger unit outside in the corridor, so you can turn the machine on without being directly in the room. Then unplug the unit, let the chemical settle down and then enter the room.

1. Add MPC liquid (already diluted) inside reservoir of fogger.
2. Bring 2 machines into room with extension cord, so they are plugged in from the corridor.
3. Place the machines in opposing directions, one on the dresser or night table, in the extreme far end of the room and the other on the floor, where the entry starts expanding into the room.
4. Aim machines upwards, into the room, to avoid direct contact with mattresses. This allows both machines, when aimed and offset with each other, to create a cyclone affect, for maximum circulation and coverage of surfaces.
5. Prior to plugging in, open all drawers, staggered from top to bottom, so chemical mist can enter.
6. Plug in machine, confirm fogger are working properly and that a cyclone is in effect, then close door and allow to operate for 45 seconds.
7. After 45 seconds, unplug units from corridor and allow 30 more seconds for chemical to settle.
8. Look at all flat surfaces to ensure they are damp, and allow to air dry.

Recommended Procedures for Cleaning & Disinfecting of Blood & Body Fluid Spills

Appropriate personal protective equipment should be worn for cleaning up a body fluid spill in order to minimize the risk of infection or transmission. Gloves should be worn during the cleaning and disinfecting procedures. If the possibility of splashing exists, the worker should wear a face shield and gown. For large spills, overalls, gowns or aprons as well as boots or protective shoe covers should be worn. Personal protective equipment should be changed if torn or soiled, and always removed before leaving the location of the spill, and then wash hands.

1. **WASH** hands and put on gloves.



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2. If the possibility of splashing exists, the worker should wear a face shield and gown. For large spills, overalls, gowns or aprons as well as boots or protective shoe covers should be worn. Personal protective equipment should be changed if torn or soiled and always removed before leaving the location of the spill.
3. Apply **Virox 5** solution to spill – wait 30 seconds.
4. Blot up the blood with disposable towels. Dispose of paper towel in plastic-lined waste receptacle.
5. Spray or wipe surface with **Virox 5** Solution – wait 5 minutes. Wipe dry with disposable paper towel. Discard paper towel as above.
6. Remove gloves and dispose in plastic-lined waste receptacle.
7. **WASH** hands.

Disposal of Infectious Material

All cleaning cloths gloves and handled tools used for the decontamination of a suspected or confirmed *C. difficile* case must be placed in a clearly marked plastic lined waste receptacle. Decontaminate all wastes before disposal; steam sterilization, chemical disinfection and or incineration.

Instructions for Confirmatory Testing of 7% AHP Concentrate Surface Disinfectants

The Accelerated Hydrogen Peroxide Test Strip (Part No. AHP500) can be used for confirmatory testing when required by facility protocol. These strips are easy to use dip-and-read reagents strips for a pass or fail determination of the hydrogen peroxide concentration in the 7% AHP Concentrate Surface Disinfectant solution.

1. Remove a test strip and immediately close the container.
2. Dip the test strip into the Diluted AHP solution to be tested for 1-second ensuring that the reaction zone is completely wetted.
3. Remove the test strip and shake of excess liquid.
4. Wait for 120-seconds then compare the reaction zone with the colour scale.

NOTE: The purpose of confirmatory testing is not to extend the shelf life beyond the 30-day claim. Should the test strip show that the Diluted AHP Solution still meets the targeted level of hydrogen peroxide after 30 days the product **MUST** still be disposed to ensure compliance with testing and label claims.