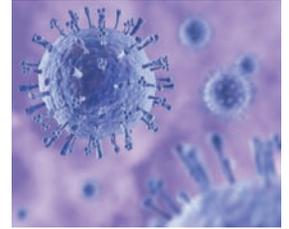


Guidelines for Environmental Cleaning & Disinfection Toward The Prevention of Viral Gastroenteritis (Norovirus)

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What is Norovirus? (Viral Gastroenteritis)

Noroviruses are a group of viruses that cause acute gastroenteritis in humans. The symptoms of norovirus infection include nausea, vomiting, diarrhea, cramping, and low-grade fever. Noroviruses are transmitted through the fecal-oral route, either by consumption of fecally contaminated food or water, direct person-to-person spread, or environmental and fomite (inanimate object or substance that is capable of transmitting infectious organisms) contamination.



What Are the Symptoms?

The average incubation period for norovirus-associated gastroenteritis is 12 to 48 hours, with a median of approximately 33 hours. Illness is characterized by acute-onset vomiting; watery, non-bloody diarrhea with abdominal cramps, and nausea. In addition, myalgia, malaise, and headache are commonly reported. Low-grade fever is present in about half of cases. Dehydration is the most common complication and may require intravenous replacement fluids. Symptoms usually last 24 to 60 hours. Volunteer studies suggest that up to 30% of infections may be asymptomatic. In other words, some affected individuals may not even know they are infected.

How Does It Spread?

Noroviruses are highly contagious, with as few as 100 virus particles thought to be sufficient to cause infection. Noroviruses are transmitted primarily through the fecal-oral route, either by direct person-to-person spread or fecally contaminated food or water. Noroviruses can also spread via a droplet route from vomitus. These viruses are relatively stable in the environment and can survive freezing and heating to 60°C (140°F). In healthcare facilities, transmission can additionally occur through hand transfer of the virus to the oral mucosa via contact with materials, fomites, and environmental surfaces that have been contaminated with either feces or vomitus.

How Do I Know I Have It?

Diagnosis of norovirus infection relies on the detection of viral RNA in the stools of affected persons, by use of reverse transcription-polymerase chain reaction (RT-PCR) assays. This technology is available at CDC and most state public health laboratories and should be considered in the event of outbreaks of gastroenteritis in healthcare facilities. Identification of the virus can be best made from stool specimens taken within 48 to 72 hours after onset of symptoms, although good results can be obtained by using RT-PCR on samples taken as long as 7 days after symptom onset. Other methods of diagnosis, usually only available in research settings, include electron microscopy and serologic assays for a rise in titer in paired sera collected at least three weeks apart. Commercial enzyme-linked immunoassays are available but are of relatively low sensitivity, so their use is limited to diagnosis of the etiology of outbreaks. Because of the limited availability of timely and routine laboratory diagnostic methods, a clinical diagnosis of norovirus infection is often used, especially when other agents of gastroenteritis have been ruled out.

How Do We Keep It From Spreading?

Patients with suspected norovirus infection should be managed with standard precautions with careful attention to hand hygiene practices. However, contact precautions should be used when caring for diapered or incontinent persons, during outbreaks in a facility, and when there is the possibility of splashes that might lead to contamination of clothing. Persons cleaning areas heavily contaminated with vomitus or feces should wear surgical masks as well. In an outbreak setting, it may be prudent to place patients with suspected norovirus in private rooms or to cohort such patients.

Environmental Disinfection Options

CDC recommends either chlorine bleach or U.S. Environmental Protection Agency (EPA) approved disinfectants for use in controlling norovirus outbreaks. Unfortunately, chlorine bleach is very corrosive, is not safe to use on many surfaces, can be poisonous to humans and domestic animals, and is hazardous to handle.

1. All disinfectants should be used on clean surfaces for maximum performance and must be registered with the EPA. It should be noted that evidence for efficacy of disinfectants against norovirus is usually based on data of efficacy against feline calicivirus (FCV) as a surrogate for norovirus. However, feline calicivirus (a virus of the respiratory system in cats) has different physio-chemical properties to norovirus and there is debate on how well data on inactivation of FCV reflects efficacy against norovirus. BioTech Medical has introduced a new SDC disinfection product called

SpectraSan 24™ that has been tested to kill the Murine species of the norovirus as well as the Feline Calicivirus species.

2. Chlorine bleach is still a very effective disinfectant solution for use on food contact surfaces in dietary departments. When disinfecting food contact surfaces, apply the bleach solution at a minimum concentration of 1000 ppm (generally a dilution of 1 part household bleach solution to 50 parts water). This concentration has been demonstrated in the laboratory to be effective against surrogate viruses with properties similar to those of norovirus. Healthcare facility staff should use appropriate PPE (e.g. gloves and goggles) when working with bleach. In areas with high levels of soiling and resistant surfaces, up to 5000 ppm chlorine bleach may be used. When using chlorine bleach, please take the proper precautions because it is a volatile substance and can cause severe harm if handled inappropriately.
3. EPA-approved disinfectants should be used according to manufacturers' instructions.
4. Quaternary ammonium compounds are often used for sanitizing food preparation surfaces or disinfecting large surfaces (e.g., countertops and floors). However, because noroviruses are non-enveloped virus particles, most quaternary ammonium compounds (which act by disrupting viral envelopes) do not have significant activity against them.
5. Phenolic-based disinfectants have been shown to be active against noroviruses in the laboratory. However, this activity may require concentrations 2- to 4-fold higher than manufacturer recommendations for routine use. Furthermore, phenolic based disinfectants can be hazardous to use and will oftentimes stain surfaces purple or yellow/orange.
6. Accelerated hydrogen peroxide has also proven to be effective against noroviruses, however, since it is an oxidizing agent, it leaves behind a white film and is not safe to use on all surfaces. Additionally, although accelerated hydrogen peroxide claims to have a low toxicity rating when fully diluted, the EPA has assigned it a Category I Toxicity rating (the highest) because at full strength it is considered hazardous and toxic. Furthermore, once diluted, accelerated hydrogen peroxide has a very short shelf life which makes it impracticable to store once diluted.
7. Heat disinfection (i.e., pasteurization to 60°C (140°F)) has been suggested, and used successfully under laboratory conditions, for items that cannot be subjected to chemical disinfectants such as chlorine bleach. However, it is an impractical method in cleaning hospitals, hotel rooms, ship cabins, schools, nursery facilities, sports complexes, and most areas where hard surfaces prevail.
8. The most effective means of killing Noroviruses is by using the SDC-powered disinfectant, **SpectraSan 24™**. This new patented product technology is rapidly becoming the standard in the marketplace, and research data has confirmed it to be the most effective, longest lasting, and safest alternative for completely eradicating extensive viral contamination.

SpectraSan 24™ is an EPA-registered, broad spectrum antibacterial, antifungal, and antiviral disinfectant that can provide up to 24-hour residual effectiveness. It is rated at EPA toxicity level IV (the lowest). Still, it kills the most dangerous pathogens; Noroviruses, Influenza A (H1N1), MRSA, HIV and a host of other dangerous pathogens and household germs – many within 30 seconds.



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I. Disinfection Protocols

Materials Needed:

When decontaminating viral infected areas, personnel are required to wear disposable gloves, masks, eye protection or face shields, and gown or protective clothing. Please put on all PPE before beginning cleaning procedures.



For questions about the above mentioned personal protective equipment, please see http://www.cdc.gov/ncidod/dhqp/gl_isolation.html (Part II.E).

General Warning

Although the CDC oftentimes recommends the use of chlorine bleach as a non-commercial alternative, it is essential to be aware of the inherent dangers, cautions, and warnings associated with hazardous solutions comprised of sodium hypochlorite. **Note:** Chlorine bleach may damage fabrics, is highly corrosive, extremely toxic, and can damage soft metals and other hard surfaces. Chlorine solutions are best used in low concentrations for specific applications on food contact surfaces. Always spot test the area or surface before applying a chlorine solution to any visible surface.

Optimum Recommendation

The safest recommendation is to use SpectraSan 24 in as many areas as possible because the silver dihydrogen citrate technology contained in this product is not only extremely effective against Noroviruses and other viral gastroenteritis pathogens; but it is non-toxic, non-corrosive, and formulated for use in medical, nursing home, and childcare environments. Furthermore, it is safe to use on soft metals and other hard surfaces. SpectraSan 24 is also the only disinfectant that can provide up to 24 hours of residual protection.

II. Health Concerns with Using Chlorine Bleach

Mixing Hazards

USE ONLY IN WELL-VENTILATED AREAS. Adverse effects of inappropriate mixtures of household cleaners usually are caused by prolonged exposure to an irritant gas in a poorly ventilated area. The most common inappropriate mixtures of cleaning agents are bleach with acids (like vinegar) or ammonia (Windex®), and acid-based toilet bowl cleaners. Potential irritants released from such mixtures are chlorine gas, chloramines, and ammonia gas which can be fatal.



Health Hazards

Chlorine bleach is corrosive and irritating to all mucosal tissue, skin, eyes and upper and lower respiratory tracts. Avoid spray bottle application with any disinfectant and never fog a chlorine or quaternary ammonium solution. Pour or “pump bottles” that do not produce aerosols are highly recommended.

Personal Protective Equipment

1. Use disposable gloves, masks, eye protection or face shields, and gown or protective clothing.
2. Environmental cleaning using a more concentrated disinfectant will require a heavier duty glove than a simple non-sterile latex/vinyl glove.

Stability of Chlorine Bleach

Open bottles of concentrated chlorine bleach will lose effectiveness after 30 days. Change bottles of bleach every 30 days for accurate concentrations. For disinfecting, an unopened bottle of chlorine bleach must be used. A dilution of fresh bleach every day of use must be prepared and unused portions must be discarded.



Other Disinfectants on the Market

A phenolic environmental disinfectant (Lysol® or Pine-Sol®) may be effective, but may require a concentration of **2 to 4 times** the manufacturer's recommendation. The use of this product at the higher concentration may pose a significant health risk to children, workers, pets and yourself. Use extreme caution when using these products. Please read the manufacturer's warnings and medical precautions.

Environmental Protection Agency (EPA) - Registered Disinfectants

Note: Some of these products now include quaternary ammonia-based disinfectants, but in combination with alcohols. These claims of effectiveness are based on in-vitro studies usually using feline calicivirus; field effectiveness in the context of outbreaks has not been evaluated.

III. Specific Clean-up Procedures

Visibly Soiled Areas

For cleaning large spills of vomitus or stool, a two-step process should be used. Put on personal protective equipment before cleanup as specified in the CDC document: http://www.cdc.gov/ncidod/dhqp/gl_isolation.html.

1. Pre-cleaning of visible/organic debris with an absorbent material (double layered and placed in a plastic bag to minimize exposure to aerosols) should precede the disinfection process.
2. Liberally disinfect area and objects surrounding the contamination with an appropriate environmental disinfectant (multiple applications may be required).

**Ensure appropriate dilution and contact times for the appropriate environmental disinfectant used.*

Frequently Touched Surfaces to Disinfect:

1. Use SpectraSan 24 on all non-porous hard surfaces and frequently touched surfaces with the exception of food contact surfaces in the dietary department. These surfaces include, but are not limited to: Doorknobs, faucets, sinks, toilets, commodes, bath rails, phones, counters, chairs (including backs), tables, hand rails, elevator buttons, light switches, ice machines, keyboards, and mattress covers.
2. For food contact surfaces, disinfect with the appropriate chlorine bleach dilution (1 part bleach solution to 50 parts water or 1000 ppm), and allow to stay wet for 5-10 minutes, and then rinse with water.

Carpet/Upholstered Furniture

1. Visible debris should be cleaned with an absorbent material (double layered) and placed in a plastic bag to minimize exposure to aerosols (disinfecting with bleach may discolor carpet). Steam clean (heat inactivation) 158°F for 5 minutes or 212°F for 1 minute for complete inactivation.

Linens/Clothing/Textiles

1. If soiled, vomit or stool should be carefully removed to minimize aerosols. Keep contaminated and uncontaminated clothes separated. Minimize disruption of soiled linens and laundry. Aerosols created may pose a risk for transmission. Wash items in a pre-wash cycle, then use a regular wash cycle using detergent and dry separately from uncontaminated clothing at high temperature greater than 170°F. Ensure segregation of clean and soiled linens/clothing/textiles.

Surfaces Corrodible/Damageable by Bleach

1. EPA-registered SpectraSan 24 should be used on all sensitive hard surfaces, soft metals and equipment.



IV. Food Service Establishments

Dietary Departments



1. According to CDC regulations, food handlers who are ill with gastrointestinal symptoms **MUST NOT** prepare or serve food for others under any circumstances. Any employee with vomiting or diarrhea must be sent home immediately, unless their symptoms are the result of a non-infectious condition (e.g., pregnancy or Crohn's Disease).
2. It is required that employees that have been ill with suspected Norovirus **MUST** not return to work for a period of 24 hours after symptoms have ended or else provide medical documentation that the symptom is from a non-infectious condition, as mentioned above. However, it is **highly recommended** that employees that have been ill with suspected Norovirus should not return to work for a period of 48 to 72 hours after symptoms have ended. Previously infected people can shed the virus for 72 hours to 2 weeks.

Serving A Non-Highly Susceptible Population

Food handlers who have been diagnosed as having Norovirus may return on a restricted basis (i.e. restricted from working with exposed food; clean equipment, utensils, and linens; and unwrapped single-service and single-use articles) in the food establishment no sooner than 24 hours after symptoms resolve. They remain restricted until they meet the following conditions:

1. Approval is obtained from the Regulatory Authority.
2. They have been medically cleared.
3. More than 48 hours have passed since the employee's symptoms have resolved.

Serving A Highly Susceptible Population

An employee who serves a highly susceptible population and who has been diagnosed with Norovirus is excluded from work until meeting the following requirements:

1. Approval is obtained from the Regulatory Authority.
2. They have been medically cleared.
3. More than 48 hours have passed since the employee's symptoms have resolved.
4. Diligent hand washing practices should be followed.

Hand Washing

1. After using the restroom, sneezing, coughing, before and after food preparation, all employees should wash their hands with soap and warm water, using friction for 20 seconds. Hands should be dried with a single-service paper towel or air dryer.
2. It is recommended that persons involved in bussing tables, handling of used utensils, cups or any dishes, exercise regular thorough hand washing, particularly before eating or handling food or clean utensils. Employees responsible for bussing tables should use appropriate gloves to protect themselves as well as from transmitting to others.

Disinfection Precautions

1. NOT ALL DISINFECTANTS SHOWN ON EPA LIST ARE APPROVED FOR USE IN FOOD FACILITIES.
2. The Product label must contain language stating approval for use in (EPA, FDA or USDA) food facilities AND provide appropriate directions for use and application rates in these settings. Consult the manufacturer for further information on approval for use on food contact surfaces and/or in food service facilities.
3. Any EPA registered pesticide product intended for sanitizing inanimate food contact surfaces must be approved by the FDA under 21CFR178.1010. See link below for approved chemicals.
For additional information: http://www.access.gpo.gov/nara/cfr/waisidx_99/21cfr178_99.html.



V. Healthcare/Hospitals

Occupational Health Policies

1. Refer to Occupational Health for employee health policies for work restrictions and return to work policies:
http://www.cdc.gov/ncidod/dhqp/gl_hcpersonnel.html.
2. Ensure appropriate use EPA-registered Hospital-Line disinfectant – (see Disinfection Protocols section).



Medical Equipment Cleaning Precautions

1. Medical equipment used for care of norovirus infected patients, should be either dedicated to that room for the duration of isolation or be thoroughly disinfected upon removal from the room.
2. Please consult terminal cleaning recommendations for your facility. Selection of appropriate cleaning agent should be consistent with the equipment manufacturer's recommendation for compatibility.

Cleaning Procedures

1. Routine environmental cleaning measures, at proper time intervals, and proper disinfection order, with the recommended concentration and contact time should be used.
2. For cleaning procedures (i.e. changing water, wash cloths, sequence of cleaning) refer to HICPAC Environmental Infection Control for Healthcare Facilities, 2003 http://www.cdc.gov/ncidod/dhqp/gl_enviroinfection.html Pgs.71-88.

Area Cleaned	Required Supplies	Directions
<i>Toilet Bowls</i>	Spray bottle, brush Frequency – Daily or more often during outbreaks	<ol style="list-style-type: none"> 1. Clean exterior and rim of toilet with recommended toilet bowl cleaner. 2. Allow to stand on toilet surfaces for 5 minutes. 3. Clean the rest of the cabin while waiting. 4. Scrub with brush. 5. Flush toilet. 6. Disinfect by spraying, SpectraSan 24 on all surfaces and allow to air dry.
<i>Bath/Showers</i>	Spray bottle, brush Frequency - Daily	<ol style="list-style-type: none"> 1. Spray surfaces of shower stall with recommended detergent solution. 2. Use brush to scrub surfaces. 3. Spray shower curtain, making sure to cover the seams. 4. Completely rinse surfaces and allow to air dry. 5. Spray SpectraSan 24 on surfaces and allow to air dry.
<i>Hand Washing Sinks</i>	Spray bottle, clean microfiber cloths Frequency - Daily	<ol style="list-style-type: none"> 1. Spray the surface of the sink and adjacent counter with mild detergent. 2. Use clean microfiber cloth to wipe surface clean and rinse. 3. Spray SpectraSan 24 on surface and allow to air dry.



<i>Floors</i>	Mop and bucket, spray bottle, clean microfiber cloths Frequency - Daily	<ol style="list-style-type: none"> 1. Fill bucket with solution of floor cleaner. 2. Use clean mop to wipe floors clean. 3. Change the solution when dirty. 4. Allow to air dry.
<i>Bathroom Fixtures & Surfaces</i>	Spray bottle, clean microfiber cloth Frequency - Daily	<ol style="list-style-type: none"> 1. Spray around the base of the toilet bowl with mild detergent. 2. Wipe soil from surfaces and rinse. 3. Spray SpectraSan 24 on walls of bathroom including doors and door handles. 4. Use clean microfiber cloth to wipe all surfaces.
<i>Bathrooms Infirmary/Health Center</i>	Mop and bucket, spray bottle, clean microfiber cloths Frequency - Daily, or more often during outbreaks	<ol style="list-style-type: none"> 1. Spray around the base of the toilet bowl using a strong toilet bowl cleaner. 2. Spray around the toilet bowl and around the rim. Allow to stand for 5 minutes. 3. Spray solution on walls of bathroom including doors and door handles. 4. Use clean microfiber cloth to wipe the walls and doors clean. 5. Make sure to wipe the entrance door handles to clean and disinfect with SpectraSan 24. 6. Mop floor with sanitizer solution and keep wet for 10 minutes. 7. Change bucket solution and fresh water mop to remove excess solution. 8. Air dry - Do not rinse.
<i>Infirmary Sleeping Areas</i>	Spray bottle, clean microfiber cloth Frequency - Daily	<ol style="list-style-type: none"> 1. Spray solution of SpectraSan 24 onto microfiber cloth until it is wet. 2. Wipe wall surfaces. 3. Wipe telephone handset and TV remote (If applicable). 4. Wipe furniture surfaces. 5. Wipe arms and backs of chairs. 6. Allow to air dry.



<i>Dorm rooms</i>	Directional fogger (Tri-Jet or similar), spray bottle, clean microfiber cloths Frequency - Daily	<ol style="list-style-type: none"> 1. Spray solution SpectraSan 24 onto clean microfiber cloth until it is wet. 2. Wipe wall surfaces including doors and door handles. 3. Wipe telephone hand set and TV remote. (If applicable) 4. Wipe all furniture surfaces. 5. Wipe arms and backs of chairs. 6. Fog Room with Tri-Jet fogger (see fogging instructions).
<i>Hand Railings</i>	Spray bottle, clean microfiber cloth Frequency - Daily	<ol style="list-style-type: none"> 1. SpectraSan 24 on clean microfiber cloth until wet. 2. Thoroughly wipe hand railings to clean. 3. Allow to air dry.
<i>Door Handles</i>	Spray bottle, clean microfiber cloth Frequency - Daily	<ol style="list-style-type: none"> 1. Spray SpectraSan 24 on clean microfiber cloth until it is wet. 2. Thoroughly wipe door handles to clean. 3. Allow to air dry.
<i>Bikes and/or Fitness Equipment (If Applicable)</i>	Spray bottle, clean microfiber cloth Frequency - Daily	<ol style="list-style-type: none"> 1. Spray detergent solution on all exercise equipment & bikes. 2. Wipe with clean towel. 3. Spray SpectraSan 24 on contact surfaces and allow to air dry. 4. Spray SpectraSan 24 on towel until wet. 5. Wipe all surfaces of free weights. 6. Spray solution on exercise mats. 7. Wipe with clean towel. 8. Allow to air dry.
<i>Furniture</i>	Spray bottle, clean microfiber cloth Frequency - Daily	<ol style="list-style-type: none"> 1. Spray SpectraSan 24 on clean microfiber cloth until wet. 2. Wipe furniture surfaces. 3. Allow to air dry.
<i>Chairs/Upholstery/Fabric</i>	Spray bottle, clean microfiber cloth Frequency - Daily	<ol style="list-style-type: none"> 1. Spray SpectraSan 24 on clean microfiber cloth. 2. Wipe chairs' armrests, seats and backs and other hard surfaces. 3. Spray fine mist on armrests, seat and backs and wipe with clean microfiber cloth. 4. Allow to air dry.
<i>Tables</i>	Spray bottle, clean microfiber cloth Frequency - Daily	<ol style="list-style-type: none"> 1. Spray fine mist of SpectraSan 24 on table surfaces. 2. Wipe with clean microfiber cloth to clean surfaces. 3. Allow to air dry.



<p><i>Counters</i></p>	<p>Spray bottle, clean microfiber cloth Frequency - Daily.</p>	<ol style="list-style-type: none"> 1. Spray counter with fine mist of SpectraSan 24. 2. Wipe with clean microfiber cloth to clean surfaces. 3. Allow to air dry.
<p><i>Vomit/Body Fluids Hard Surfaces</i></p>	<p>Brush, scupper, spray bottle, clean microfiber cloth.</p>	<ol style="list-style-type: none"> 1. The spill area must be cleaned of noticeable organic material before the disinfecting step. 2. Apply solution to spill and allow 5 minutes of contact time. 3. After 5 minutes remove fluid capable of transmitting infection with disposable towels. Discard the microfiber cloth in a plastic-lined waste receptacle. 4. After cleaning, reapply solution to spill areas and allow wet contact for at least 5 minutes. 5. Reapply solution to ensure a complete wet contact. Wipe dry and discard the cloth in a plastic-lined waste receptacle. 6. Spray entire area with SpectraSan 24 and allow to air dry.
<p><i>Body fluids Carpets</i></p>	<p>Brush, scupper, spray bottle, clean microfiber cloth.</p>	<ol style="list-style-type: none"> 1. The spill area must be cleaned of noticeable organic material before the disinfecting step. 2. Apply detergent solution to spill and allow 5 minutes of dwell time. 3. After 5 minutes - remove fluid capable of transmitting infection with disposable towels. 4. Discard the towels in a plastic-lined waste receptacle 5. After cleaning, reapply solution to spill areas and allow wet contact for at least 5 minutes to guarantee deep saturation of solution into carpet. 6. Rinse carpet using clean water: <ol style="list-style-type: none"> a. Pour water on carpet. b. Blot area with clean rag. 7. Spray SpectraSan 24 on area and allow to air dry.



Nursing Stations

1. Counters: spray SpectraSan 24 on counters, wait 2 minutes, and wet wipe with a microfiber cloth.
2. Medical charts: spray SpectraSan 24 on microfiber cloth and wet wipe the surfaces.
3. Computer keyboards: keyboard covers can be quickly and easily wiped clean and disinfected. If the facility does not have keyboard covers available, the keyboards should be wiped daily with a solution of SpectraSan 24 liberally sprayed on a microfiber cloth and wiped over the keys.
4. Fax/copy machine buttons: spray SpectraSan 24 on microfiber cloth and wet wipe surface.

MRI/Radiology

1. Pads: spray SpectraSan 24 on to the surfaces, wait 2 minutes, and wet wipe with a microfiber cloth.
2. Hand rails: spray SpectraSan 24 on microfiber cloth and wet wipe, carefully wiping under and around all sides of surfaces.
3. Any surface touched by patients: spray SpectraSan 24 on to a microfiber cloth and wet wipe. Allow to air dry.

Patient Rooms

1. Light switches: spray SpectraSan 24 on microfiber cloth and wet wipe surface.
2. Flush handles on toilet: spray SpectraSan 24 on surface and allow to air dry.
3. TV remote: spray SpectraSan 24 on a microfiber cloth and wet wipe all buttons, sides and back of unit.
4. Bed remote/call buttons: same as TV remote.
5. Food trays: spray SpectraSan 24 on surface, wait 2 minutes, and wet wipe with a microfiber cloth.
6. Blood pressure cuffs: spray SpectraSan 24 on microfiber cloth and wet wipe surface.

Laundry Concerns

1. Do not shake soiled linens and laundry. Aerosol particles may pose a risk for transmission. Soiled linens should be placed directly into a bag at the point of removal.
2. Ensure proper separation of clean and soiled laundry.
3. For additional laundry information go to <http://www.cdc.gov/ncidod/hip/enviro/guide.htm>, pgs 98-103.

Ice Machines

1. Contaminated ice machines must be disinfected.
2. For protocols, see <http://www.cdc.gov/ncidod/hip/enviro/guide.htm>, pgs 65-67.



VI. Long Term Care/Assisted Living Facilities

Patient Rooms

1. Hand rails: spray with SpectraSan 24 and wet wipe with a microfiber cloth, carefully wiping under and around all sides of surfaces.
2. TV remote: spray microfiber cloth with SpectraSan 24 and wet wipe. Allow to air dry.
3. Food trays: clean with detergent and warm water, rinse, and then spray and wet wipe with SpectraSan 24.



Nursing Stations

1. Computer keyboards: spray SpectraSan 24 on a clean microfiber cloth and wet wipe.
2. Counters: spray counters, allow dwell time, wet wipe with microfiber cloth.
3. Office machines: spray SpectraSan 24 on a microfiber cloth and wet wipe buttons and touch points.
4. Stethoscopes: wet wipe with SpectraSan 24 using a microfiber cloth.
5. Blood pressure cuffs: spray SpectraSan 24 on microfiber cloth and wet wipe surface.
6. Hand rails down hallways: spray SpectraSan 24 on microfiber cloth and wet wipe surface, carefully wiping under and around all sides of surfaces.
7. Wheelchair handles and arm rests: spray SpectraSan 24 on microfiber cloth and wipe surface.
8. Bed pans: spray SpectraSan 24 on bed pan, wait 2 minutes, and wipe with a microfiber cloth.

Social Areas

1. TV remote: wet wipe with SpectraSan 24 and allow to air dry.
2. Chairs: spray all touch points of chair, arm rest, back, underside grips with SpectraSan 24, wet wipe, and allow to air dry.
3. Hand rails: spray with SpectraSan 24, wet wipe and allow to air dry.
4. Canes: spray SpectraSan 24 on microfiber cloth and wet wipe.
5. Walkers: spray SpectraSan 24 on microfiber cloth and wet wipe surface.
6. Physical therapy equipment: spray SpectraSan 24 on microfiber cloth and wet wipe surface.
7. Door knobs: spray door knobs directly with SpectraSan 24 and wet wipe with microfiber cloth.

VII. Childcare Operations

Hand Washing

1. All employees should wash hands with liquid soap and warm water, using friction for 20 seconds, paying special attention to under fingernails. Dry hands with a single-service paper towel or air dryer.
2. Hands should be washed after using the restroom, sneezing, coughing, changing diapers, and before any food preparation or service.
3. If liquid detergent and warm water are not available, use an antimicrobial hand sanitizer that has at least 60% alcohol content. Keep all hand sanitizers away from the reach of children. Antibacterial hand sanitizers are not effective against viruses.



Toy Cleaning

1. Toys should be cleaned and disinfected daily with SpectraSan 24.
2. Any toy that enters a child's mouth (rubber or plastic blocks, balls, etc.) must be disinfected with SpectraSan 24. SpectraSan 24 is safe to use in childcare environments and will not stain, discolor, or corrode toys. If available, run the toys through the dishwasher with high temperature (170°F). Follow up with a coating of SpectraSan 24 to provide long-term residual protection.
3. Remove visible debris on softer toys that have been soiled by vomit (see Disinfection section). Launder toys as directed or discard if necessary.

Keeping Diaper Changing Surfaces Clean

1. Surfaces should have a plastic covered pad without cracks.
2. Use disposable material to cover the pad on changing tables such as shelf paper, wax paper, scrap computer paper, cut up paper bags. Discard cover after each diaper change.
3. Clean the surface after every diaper change by washing with detergent, water and friction, followed by a coating of SpectraSan24 and then wet wipe surface.
4. Caregivers must wash their hands immediately.
5. After changing a diaper, the diapered child's hands should be washed also.

Play tables

1. Spray SpectraSan 24 on tables, wait 2-minutes, and wipe with a microfiber cloth.

Restrooms

1. Toilets: spray SpectraSan 24 on toilet seat, allow product to dwell for 2 minutes on surface, and wet wipe with a microfiber cloth.
2. Flush handles: spray SpectraSan 24 on handles and allow to air dry.

General Area

1. Play equipment: spray SpectraSan 24 on equipment (touch surfaces), allow 2 minutes of contact time, and wet wipe with a microfiber cloth. For large areas or equipment, use a fogger to provide a light mist over the surface. Allow to air dry or wait 2 minutes and wet wipe with a microfiber cloth.
2. Mats: spray SpectraSan 24 on microfiber cloth and wet wipe surface.
3. Drinking fountains: spray SpectraSan 24 on the spout and handle, wait 2 minutes, and wipe with a microfiber cloth.
4. Furniture: spray SpectraSan 24 on high touch surfaces, and wet wipe with a microfiber cloth.
5. Cribs: spray SpectraSan 24 on high touch surfaces and wipe with a microfiber cloth.
6. Mattresses: spray SpectraSan 24 on microfiber cloth and wet wipe entire surface.

Reception Area

1. Sign-in pens: spray SpectraSan 24 on microfiber cloth and wet wipe surface.
2. Magazine covers (wiped down): spray SpectraSan 24 on microfiber cloth and wet wipe surface.
3. Armrests on chairs should be sprayed with SpectraSan 24, allow to dwell for 2 minutes, and wet wipe.



VIII. Schools & Educational Institutions

Desks, Counter Tops and Other Frequently Touched Hard Surfaces

1. Desks: spray SpectraSan 24 on desks, allow 2 minutes of contact time, wipe with a microfiber cloth. Mist (using a fogger) lightly over the desks while walking down each aisle. When all desks have been covered, go back and lightly wipe the surfaces with a microfiber cloth.
2. Chairs: spray SpectraSan 24 on the hard surfaces of the chairs, including the top and underside of the armrests and seat where people place their hands. Wipe with a microfiber cloth.
3. Door knobs: spray SpectraSan 24 on the door knobs and let air dry.
4. Computer keyboards: keyboard covers can be quickly and easily wiped clean and disinfected. If the facility does not have keyboard covers available, the keyboards should be wiped daily with a solution of SpectraSan 24 liberally sprayed on a microfiber cloth and wiped over the keys.
5. Vending machines: spray the button, levers, and coin return of vending machines. Wait a couple of minutes and wipe with a microfiber cloth.
6. Cafeteria tables: spray SpectraSan 24 on table tops and seats and wet wipe with a microfiber cloth. For large areas, use a fogger on the fine setting and lightly spray the tables and seats. Go back when finished and wipe surfaces with a microfiber cloth.
7. Stairwell hand rails: spray or wipe (with a SpectraSan 24 moistened microfiber cloth) handrails, being careful to wipe the undersides as well as on the top surfaces. Allow to air dry.
8. Sports equipment: refer to BioTech Medical manual entitled ***MRSA Prevention Guidelines for Athletes and Athletic Facilities***.
9. Shared lab equipment: if the equipment is shared by students, spray SpectraSan 24 on a microfiber cloth and wet wipe the touch surfaces.



Administrative Offices

1. Elevator buttons: spray SpectraSan 24 on the buttons and allow to air dry.
2. Door handles: spray SpectraSan 24 directly on surfaces and wet wipe with a microfiber cloth.
3. Escalator rails: spray the rubber rails, wait 2 minutes, and then wipe with a microfiber cloth.
4. Telephones: wet wipe with SpectraSan 24 on a microfiber cloth and allow to air dry.
5. Fax machine/copy machine: wet wipe with SpectraSan 24 on a microfiber cloth.
6. Staplers and shared office equipment: spray SpectraSan 24 on microfiber cloth and wipe.
7. Vending machine buttons, coffee machine/station: levers, and coin returns of vending machines: spray with SpectraSan 24 and wet wipe with a microfiber cloth.
8. Restroom toilets: spray all surfaces and allow to air dry. Wet wipe the toilet seat with a microfiber cloth and allow to air dry.
9. Flush handles: spray with SpectraSan 24 and wet wipe with a microfiber cloth and allow to air dry.
10. Door handle of restroom door: spray directly on the surface and wet wipe with a microfiber cloth and allow to air dry.



IX. References

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