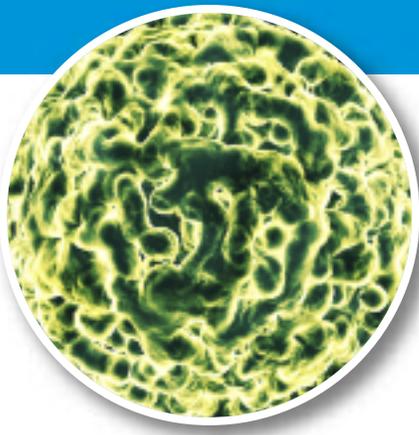


NOROVIRUS INFORMATION GUIDE





ACKNOWLEDGEMENTS

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CASE STUDY: NORWALK-LIKE VIRUS LINKED TO CAKE DECORATOR



The local supermarket bakery was the talk of the town. In fact, this store made Georgia history with their in-store prepared frosted cakes and desserts. It was a Saturday in February; similar to most for this bakery department, and its employees were busy making final preparations and decorations for their customers' cake orders. So what was so special or history making? Let's flash forward three days, to Tuesday, February 8, when their customers who had eaten these cakes become ill with gastroenteritis symptoms, such as, vomiting and diarrhea. Many of those who became ill contacted the Georgia health officials. Here is what the Georgia Epidemiology Report (June 2001) said about the incident:

"The largest outbreak reported in Georgia during 2000 occurred in Gwinnett County in February. Concerned customers called the Georgia Division of Public Health and the Georgia Department of Agriculture to report that people had become ill with gastroenteritis following birthday parties, baby showers and other celebrations beginning on February 8."

"Investigation showed that all of the gatherings had served frosted cake or frosted puffed rice bars purchased from a single supermarket bakery. Interviews of ill and well attendees found that eating the frosting was statistically associated with illness. Almost all of the implicated frosted desserts were frosted on February 5. The cake decorator had become ill with gastroenteritis on February 4, but went to work on February 5 anyway and frosted approximately 80 cakes. She had long artificial fingernails, which are notoriously difficult to clean, and did not wear gloves during frosting preparation or application. Laboratory tests detected Norwalk-like virus in stools from 15 party attendees, but no stool was received from the ill cake decorator for testing."

"The Georgia Department of Agriculture issued a press release on February 9 to advise persons to discard any cake purchased from the supermarket bakery on February 5 and 6. Based on cohort studies of 30 events at which the cake was served, we estimate that more than 1000 persons were ill in this outbreak."



Common norovirus symptoms include nausea, vomiting, diarrhea, and some stomach cramping, according to the federal Centers for Disease Control and Prevention.

CASE STUDY: NOROVIRUS CLOSES HARVARD FACULTY CLUB

SINCE SUNDAY, 100 REPORTS OF ILLNESS

By Brock Parker

Globe Correspondent / April 8, 2010

As many as 200 people may have been affected by a norovirus outbreak at the Harvard Faculty Club, forcing the restaurant and lodge to close for the second time in a week.

The club, which closed last week because of concerns about the virus, shut down again Tuesday as about 100 people reported becoming ill after eating at the club between Easter brunch Sunday and Tuesday morning.

Crista Martin, a spokeswoman for the school's hospitality and dining services, said the decision to close was made immediately Tuesday when illnesses consistent with the gastrointestinal ailment were reported.

The club will remain closed for at least seven days while the building located on Quincy Street in Cambridge is cleaned, said Louise Rice, director of public nursing for the city.

"It's very hard to rub out entirely," Rice said.

The club was closed from March 30 to Saturday for what has now been confirmed as a norovirus outbreak, Rice said.

Common norovirus symptoms include nausea, vomiting, diarrhea, and some stomach cramping, according to the federal Centers for Disease Control and Prevention. Rice said no one has been hospitalized from the outbreak at the club.

But Rice estimated that about 100 other people became ill during the first outbreak. Many of them were visiting students.

Harvard voluntarily closed the club when the first wave of illnesses was reported last week, and the club brought in an outside cleaning crew to scrub the building down, Rice said.

The city inspected the club, and Rice said the building was "spotless." The city also screened full- and part-time employees at the club, about 100 of them, before it reopened Sunday, she said.

But by Tuesday morning, Harvard notified the city that a number of people had reported becoming ill after eating at the club between Easter Brunch and Tuesday morning.

Norovirus infections are spread by eating food or drinking liquids contaminated with the virus, touching contaminated surfaces before putting fingers into one's mouth, and having direct contact with an infected person, according to the CDC.

The norovirus outbreak at the club is not the only one in recent weeks. A norovirus may have caused more than 70 students to become ill at Emerson College in Boston since the middle of last month. Although Harvard Faculty Club employees were screened for the illness before the club reopened, Rice said, it is possible that at least one employee was carrying the virus without any symptoms. Otherwise, Rice said, the outbreak is probably tied to the virus being in the environment.

Cleaning crews will need to scrub every surface in the building from doorknobs to walls and telephones, she said.

Martin said the Faculty Club will follow all of the recommendations made by public health officials and work with them to "safeguard the health of our customers."

In a message on the Harvard Faculty Club's website yesterday, the club was encouraging anyone who became ill after dining there to contact a doctor with immediate medical concerns and report an illness to the Cambridge Department of Public Health at 617-665-3800 so the cases can be accurately documented.

Brock Parker can be reached at brock.globe@gmail.com.

(Boston Globe, April 8, 2010, http://www.boston.com/news/local/massachusetts/articles/2010/04/08/norovirus_closes_harvard_club/)

PURPOSE

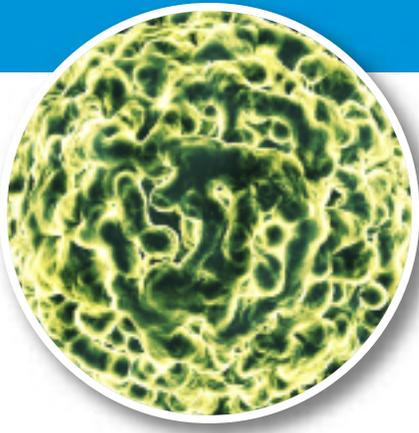
The retail food industry plays a significant role in assuring a safe food supply for consumers. At the retail level, activities to control food safety risks can be divided into four key areas: the supplier and source of foods and food ingredients; in-store practices and procedures; education and training of employees and food handlers; and consumer education. A total approach to food safety management must address each of these areas. This guidance is intended to specifically address the area of in-store practices and procedures.

This guidance was created to assist the retail food industry in preparing for and effectively handling the cleaning and disinfection of a potential norovirus incident directly associated with vomitus and/or fecal materials. It represents a collaborative effort and review by food safety professionals that includes industry, academia and state and federal regulatory professionals. It's intended to be a 'living' document and one that will be revised as new information becomes available. For now, it provides insights and direction based on our most current and relevant knowledge and thinking.



BACKGROUND

Noroviruses (previously known as Norwalk-like viruses) are widely recognized as the agents known to cause outbreaks of illness among large numbers of people on cruise ships, however the importance of these viruses doesn't stop there. Since the original norwalk virus was identified in 1972, there has been increasing recognition of noroviruses as agents of viral gastroenteritis traced to restaurants and catered meals, nursing homes, schools and camps. In 2006, the U.S. Centers for Disease Control and Prevention (CDC) estimated that at least 50 percent of foodborne outbreaks in the United States were attributed to norovirus¹ with 60 percent in restaurants and banquet facilities, 9 percent in private homes, 8 percent in the workplace, 4 percent in schools, and 2 percent in healthcare. Other common venues are camps, churches/temples, fairs, festivals, picnics, and in prisons/jails.² Norovirus is also a common cause of gastroenteritis outbreaks in Europe³ and other countries.



SYMPTOMS AND DISEASE PROCESS

Norovirus is extremely contagious due to its low infectious dose.

Norovirus infection causes acute gastroenteritis: nausea, frequent, sudden and occasionally violent vomiting, and/or diarrhea. Other symptoms include low-grade fever, chills, headache, muscle ache and fatigue. Symptom onset can be as soon as 12 hours after exposure, but more often is 24 to 48 hours after ingesting the virus. The illness usually lasts one to two days, and in most cases recovery occurs without further complications unless the person becomes dehydrated from the illness. Dehydration and related complications are a higher risk in very young, elderly or immunocompromised persons.

Norovirus is extremely contagious due to its low infectious dose of as few as 10 to 100 viral particles. This means that low-level contamination of food, water, and surfaces can lead to outbreaks. People may infect others by shedding the virus from the time they start feeling ill and upwards of days to weeks after symptoms resolve.⁴ There are presently no vaccines to prevent infections and no antiviral medicines available that treat norovirus infection. Immunity is short term which allows for individuals to become re-infected with norovirus. The Center for Infectious Disease Research and Policy⁵ and the CDC Norovirus Technical Fact Sheet⁶ provides additional information of clinical interest on symptoms and disease.



PRIMARY ROUTES OF TRANSMISSION

Outbreaks have frequently been associated with consumption of ready-to-eat foods, including various salads, sandwiches, bakery products and other shelf stable foods.

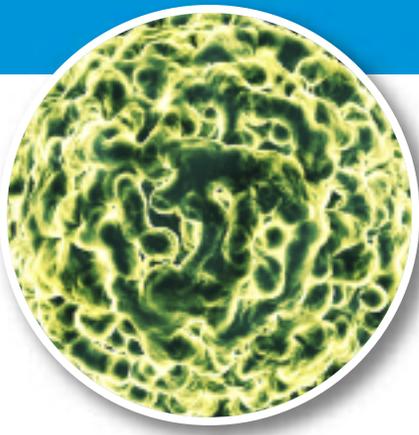
Noroviruses are present in the feces or vomitus of infected people, frequently at very high levels (millions to billions of viral particles per gram). It is for this reason that a person suspected of having norovirus infection be excluded from handling food, equipment or packaging materials. Most foodborne outbreaks of norovirus illness are likely caused by direct contamination of food by a food handler. Norovirus can be carried by aerosols over distances longer than three feet where they can subsequently contaminate a surface.⁷ Other people may become ill by touching these contaminated surfaces and then transferring the virus to themselves by touching their mouths or a ready-to-eat food. Norovirus can not infect a person through the respiratory system (by breathing in virus particles), but virus particles contained in aerosol droplets can enter the gastrointestinal tract by contact with the mucosal tissues in the mouth or nose.

Outbreaks have frequently been associated with consumption of ready-to-eat foods, including various salads, sandwiches, bakery products and other shelf stable foods. Liquid or semi-solid items (i.e., cake icing) that allow the virus to disperse throughout the food have also been implicated as a cause of outbreaks. Additionally, food can be contaminated at its source, for example oysters harvested from norovirus-contaminated waters have been associated with widespread outbreaks of gastroenteritis. Fresh produce items, such as berries and leafy greens, may become contaminated at production due to the use of contaminated irrigation waters

or because of infected food handlers harvesting the product.⁸ A large norovirus outbreak, likely involving person-to-person spread, impacted more than 1,000 people in the Houston Astrodome when it housed Hurricane Katrina evacuees. Inadequate sanitary conditions, the lack of adequate hand-washing facilities, delays in cleaning and decontaminating soiled areas and bedding, and close proximity of people contributed to the spread.⁹

Human norovirus cannot be detected by standard culture methods, but only by more complex techniques, most specifically reverse transcription polymerase chain reaction. Because of continued difficulties in detection of these viruses in foods, diagnosis of foodborne norovirus illness is often based on symptoms. Norovirus is not yet screened for routinely in fecal panels done by local healthcare providers in their efforts to diagnose diarrheal disease.





CONTROL



PROPER HAND WASHING AND NO BARE HAND CONTACT (I.E., DISPOSABLE GLOVE USAGE)

Washing hands properly and often is the best control. Follow FDA's Food Code guidance for handwashing regularly:

- ▲ Wet your hands with warm water
- ▲ Apply a generous amount of soap
- ▲ Rub hands together briskly for 10 - 15 seconds
- ▲ Rinse hands
- ▲ Dry hands with a paper towel or air drying device.

Note: Handwashing process should take 20 seconds.

- ▲ Eliminate bare hand contact with ready-to-eat foods by using suitable utensils such as disposable gloves, utensils, deli tissue or dispensing equipment.
- ▲ Use disposable gloves properly to further minimize risks.

PART 1: MANAGEMENT PLAN

In an establishment where food is handled, having a written plan and being prepared to implement the plan are important elements to effectively respond to and manage situations potentially involving norovirus contamination. In addition, having the necessary equipment on hand (i.e., disinfectant products effective against norovirus, personal protective equipment, biohazard clean-up kits, etc.) and employees properly trained before an incident occurs are essential for effective control. Consider contacting your local public health officials and incorporating their recommendations into your plan. This document helps provide an overview and outlines the 'key' factors your plan should include pertaining to a Pre and Post Bodily Fluid Incident, involving vomitus and/or diarrhea.

PART 2: PRE INCIDENT KEY FACTORS

Written employee health policy:

- ▲ The primary control of norovirus relies on the exclusion of ill individuals from food handling activities and the food establishment itself.
- ▲ The U.S. Food and Drug Administration (FDA) has incorporated minimum requirements into the Food Code pertaining to management and employee responsibilities, restrictions and reinstatement of food employees with symptoms of vomiting and/or diarrhea, or diagnosed with specific foodborne illnesses, including norovirus. For your reference, see FDA's 2009 Food Code, section 2-201 pertaining to "Responsibility of Permit Holder, Persons in Charge, Food Employees and Conditional Employees" or by going to the following link: <http://www.fda.gov/Food/FoodSafety/RetailFoodProtection/FoodCode/FoodCode2009/ucm181242.htm#part2-2>.

Another resource is FDA's Employee Health and Hygiene Handbook at:

<http://www.fda.gov/Food/FoodSafety/RetailFoodProtection/IndustryandRegulatoryAssistanceandTrainingResources/ucm113827.htm>

- ▲ The health policy should be specific for your operations and include when and how you will consult with your local regulatory authority on the restriction and reinstatement of food employees.
- ▲ Assemble key contact information for health and regulatory agencies for your operating areas and keep information current.

PART 3: POST INCIDENT KEY FACTORS

Witnessing and Reporting of a Vomitus and/or fecal incident:

- ▲ Have a procedure in place and train all employees to ensure they are aware of how to identify and report a vomiting and/or fecal contamination incident to management. This includes instances where a patron has contaminated a restroom with vomitus or fecal material.
- ▲ Prompt attention to disinfection is needed to reduce the potential exposure to norovirus and resulting illness/outbreaks.

CONTROL (CONTINUED)

NOROVIRUS ASSESSMENT:

- ▲ If you can determine factors not associated with norovirus (i.e., pregnancy, reaction to medication, etc.) then routine cleaning and disinfection procedures for handling bodily fluids may be sufficient.
- ▲ If no cause for the incident can be determined or if there is doubt as to the cause, treating the event as a potential norovirus incident is recommended and the following procedures should be implemented.

PART 4: CLEAN-UP PROCEDURES FOR SUSPECTED EXPOSURE TO NOROVIRUS

The recommendations in this guidance can be incorporated into your cleaning and disinfection procedures for spills related to a suspected norovirus infection and/or associated with contaminated hard surfaces including, but not limited to: restrooms, floors, walls, countertops, display cases and food preparation areas and equipment.

GENERAL OVERVIEW FOR MANAGING VOMITUS OR FECAL INCIDENTS

ROLE OF THE EMPLOYEE

- ▲ Manager or Person-in-Charge should be responsible for ensuring proper procedures and thoroughness of response are followed by designated employees.
- ▲ Only employees trained in the appropriate use of personal protective equipment (PPE) should respond to and clean-up the incident. Equipment including disposable masks, nonabsorbent disposable gloves, eye protection and aprons are necessary while cleaning-up after an incident.
- ▲ It is recommended that employees directly involved with clean-up activities closely monitor their health for potential signs and symptoms of norovirus illness up to 72 hours after cleaning the affected areas. This is important to further control the potential for 'secondary' transmission if infected employees were to handle food after contracting a norovirus infection.

DEFINE THE AREA OF CONTAMINATION:

- ▲ When norovirus is suspected as the cause for a vomitus and/or fecal incident by an employee or customer, the soil should be treated as potentially infectious material. All individuals in the immediate area should be cleared along with securing the area prior to and during clean up. Also, assess the overall area of contamination and increase the radius to be cleaned and disinfected based on factors such as velocity and direction of air movement; potential foot traffic through affected areas prior to securing; etc. Past outbreaks have suggested norovirus can contaminate environmental surfaces up to 25 feet from the source due to airborne contamination.

CONTAINMENT OF THE CONTAMINATED AREA:

- ▲ Employees should utilize all personal protective equipment (PPE) per your company policy.
- ▲ To minimize potential airborne contamination, the vomitus and/or fecal material should be immediately covered with a disposable cloth, paper towels or other absorbent material and everything, especially food-contact surfaces, within the defined area should be disinfected.

SUGGESTED SUPPLIES:

'Caution! - Wet Floor' signs or safety cones

Eye protection

Disposable gloves (vinyl, latex or rubber)

Disposable mask

Disposable plastic apron

Biohazard clean-up kits which would include:

- ▲ Liquid spill absorbent material
- ▲ Disposable shovel or scrapper
- ▲ Disposable bags and bag ties
- ▲ Disinfectant rated for norviruses

Paper towels

Several plastic trash bags and bag ties

Disinfectant and applicators (effective against viruses, including norovirus)

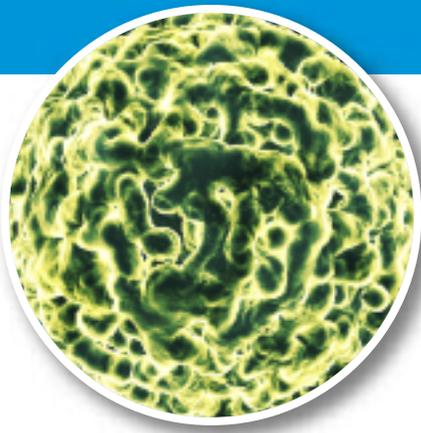
Sanitizing solution

Mop and mop buckets (note: mops are not recommended for clean-up, unless mop head is immediately discarded after use)

Buckets for cleaning solutions

Spray bottles and/or portable hand pump spray applicator

Note: Consider assembling and storing these supplies in a 'kit' to allow for easier access and rapid response.



DISINFECTION OF THE CONTAMINATED AREA:

▲ For environmental disinfection, the CDC recommends a diluted chlorine bleach solution (made from 5.25% sodium hypochlorite bleach) be applied to environmental surfaces at prescribed concentration levels.^{10,11}

Other EPA registered disinfectants for norovirus can be used for food establishments.¹²

- ▲ When using an EPA registered (for norovirus) disinfectant, apply per manufacturer’s instructions and follow prescribed contact time.
- ▲ Repeated application of disinfectants are suggested to further ensure the treated area remains saturated to achieve required contact time.
- ▲ Refer to Step by Step Cleaning Procedures on page 11 for detailed disinfection and clean-up recommendations.

CHLORINE BLEACH DISINFECTION REFERENCE CHART:

Description of Environmental Surface	Chlorine Bleach (5.25% Sodium Hypochlorite) Concentration (PPM)	Mixture	Contact Time
‘Clean’ hard, non-porous surfaces	1000 ppm	1/3 cup bleach per gallon of water	5 minutes
‘Soiled’ hard, non-porous surfaces	5000 ppm	1 2/3 cup bleach per gallon of water	5 minutes
‘Soiled’ porous surfaces	5000 ppm	1 2/3 cup bleach per gallon of water	5 minutes

Note: Discoloration or damage may occur where 5.25% hypochlorite bleach is used. Ensure treated areas are well ventilated.

Chart References:

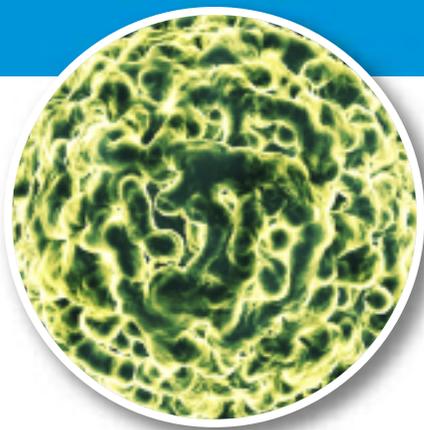
- http://www.nps.gov/public_health/info/factsheets/fs_noro_r&c.htm
- http://www.cdc.gov/ncidod/dhqp/id_norovirusFS.html

STEP BY STEP PROCEDURES FOR MANAGING VOMITUS AND/OR FECAL INCIDENTS

1. Specially trained staff should be assigned clean up and disinfection tasks.
 2. Define the area of contamination and the area to be disinfected.
 3. Close or block off the affected area(s) or department(s) using the 'Caution - Wet Floor' signs, caution tape or safety cones until the clean up procedure is completed. Control foot traffic of employees and/or customers until clean up procedures and disinfection has been completed.
 4. Put on your personal protective equipment (PPE).
 5. To minimize potential aerosol spread, the soiled areas should be covered immediately with a disposable cloth or paper towels.
 6. Use absorbent, paper towels, etc. to soak up excessive soil caused by vomitus and/or feces. Carefully transfer these and any solid matter into a plastic bag by folding it on itself and placing the waste materials into the plastic bag. Double bagging is recommended. Apply disinfectant solution over absorbent materials and seal bag(s).
 7. **Apply a chlorine bleach solution or other EPA registered (against norovirus) disinfectant to all surfaces within defined contamination areas (equipment, floors, walls, etc).** Avoid application of disinfectant solution via excessive force or focused stream (i.e., power washer or hose with sprayer handle) to prevent aerosolizing any virus particles.
- NOTE:** Work from the perimeters of the room or affected area towards either the center of contamination site or a floor drain.
8. For floor surfaces, generously apply the disinfectant with a disposable towel or mop head, keeping surfaces wet per the manufacturer's label then allowing surfaces to air dry.
 9. Disassemble all exposed food preparation equipment within potential contamination area and apply disinfectant solution per manufacturer's label. Allow the surfaces to remain wet per contact time recommended on chemical manufacturer's label instructions.
 10. Consider repeating steps 7 through 9 above as a precautionary measure to further ensure the norovirus agent is fully inactivated.
 11. It is recommended that open and exposed food items and single service items be discarded. Some alternatives to discarding intact and sealed food containers or packaging supplies might include implementing a documented product disinfection process that is approved by your local regulatory official. For those items discarded, place food and containers into a trash bag, seal, and then place into outside dumpster/compactor.
 12. For food contact surfaces, which were disinfected, rinse the surface and resume routine cleaning and sanitizing procedures.
 13. For non-food contact surfaces, resume routine cleaning and sanitizing procedures.
 14. Bag, seal and discard all disposable cleaning equipment (i.e., mop heads, gloves, aprons), exposed to the initial contamination or used during clean up.
 15. Disinfect any tools or other non-disposable items used in the clean up (i.e., mop buckets, handles).
 16. Immediately after clean-up procedures are completed, thoroughly wash face and hands (giving extra attention between fingers and under finger nails) using defined procedures and soap.
 17. Reopen the affected area following natural drying.

IMPORTANT: Special cleaning attention should also be given to areas such as restrooms and drinking fountains and other common areas with high potential for hand contact. Even though vomitus or fecal material may not be visible, it is common for sick individuals to use public restrooms following an incident. Refer to Appendix B for more details.





APPENDIX A

QUICK REFERENCE OF AFFECTED AREAS

ITEM	ACTION
Possible norovirus vomitus or fecal incident within food preparation department	Immediately stop all food preparation and service, secure area and implement clean-up and disinfection procedures
Possible norovirus vomitus or fecal incident adjacent to food preparation department	Secure area, immediately stop all food preparation and service, implement clean-up and disinfection procedures
Possible norovirus vomitus or fecal incident within public, dining, or non-food preparation areas	Secure area, implement clean-up and disinfection procedures
Any 'open or in-use' food, ice or single service items within defined area directly contaminated	Assess and discard as needed
Any 'open or in-use' food, ice or single service items within defined area that could have been contaminated by airborne (aerosolized) droplets	Assess and discard as needed
Exposed food preparation equipment and utensils within defined area (refer to 'Specific Touch Points' listed in Appendix B)	Disinfect. Wash, rinse and sanitize
Non food contact surfaces within defined area	Disinfect. Wash, rinse and sanitize
Common areas (restroom & break room) used as a result of vomitus or fecal incident	Immediately close until thoroughly disinfected and cleaned
Linens (including clothes, aprons, wiping cloths, napkins, table cloths, etc.) within defined area of incident	Thoroughly wash using 'hot' water cycle - temperature of at least 160°F (71°C) for a minimum of 25 minutes. Dry linens using high temperatures ¹³
Carpeted areas within defined area of incident	Steam clean at a minimum of 140°F (60°C) ¹⁰
Air ventilation systems within adjacent areas (i.e., exhaust hoods, vents in restrooms)	Implement clean-up and disinfection procedures for exterior of ventilation systems. Assess if additional disinfection for interior of system would be necessary

APPENDIX B

SPECIFIC TOUCH POINTS:

COMMON AREAS:

- Door handles, push plates, thresholds and hand railings
- Storage areas for packaging materials (plastic bags or containers, etc.)
- Trash receptacle touch points
- Front counter
- Drink and condiment dispensers
- Drinking fountains
- Display cases
- Registers, check stand areas, key pads
- Carts and handles
- Dining area (chairs, tables, counters, condiment dispensers, etc.)

FOOD PREPARATION DEPARTMENTS, SERVICE OR STORAGE AREAS:

- Door handles and push plates
- Handles of all the equipment doors and operating push pads (service display cases, scales, slicer knobs, etc.)
- Handles of the dispensers (beverage, etc.)
- Ice scoops and shovels
- Walk in and other refrigerator handles
- Walk in refrigerator and freezer plastic curtains
- Freezer handles
- 3-compartment sink and mop sink handles
- Handwash sink handles
- Soap dispenser push plates at handwash sink
- Towel dispenser handle at handwash sink
- Food preparation utensils and wares
- Thermometers
- Trash receptacle touch points
- Cleaning tools
- Buckets

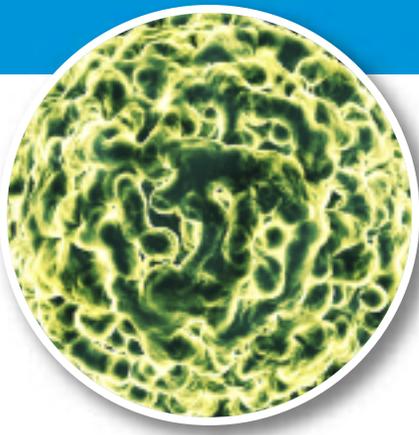
- Light switches and light fixtures
- Telephone keypads and hand sets
- Computers and keypads
- Office areas handles and table desk tops
- Phones/intercoms
- Portable phones
- Non slip rugs or mats

RESTROOMS:

- Door handles
- Sink faucets and toilet handles
- Toilet seats and lids
- Toilet paper dispensers
- Toilet seat cover dispensers
- Latch or handle on toilet stall door
- Towel dispenser handles
- Soap dispenser push plates
- Baby changing stations
- Trash receptacle touch points
- Light fixtures
- Ceiling fans and vent covers

BREAK ROOM:

- Door handles, push plates, thresholds and hand railings
- Dining tables
- Chairs and booths
- Trash receptacle touch points
- Drinking fountains
- Exterior of vending machines
- Lockers
- Phones or intercoms



APPENDIX C NOROVIRUS: INCIDENT MANAGEMENT AND CLEAN-UP

Chart Reference:

Green
Standard procedures used within facility.

Yellow
Heightened norovirus incident(s) identified within community - additional precautionary cleaning and disinfection procedures suggested.

Red
Suspected or confirmed norovirus incident(s) identified within facility - remediation required.

Description:	Level Green (Standard Procedures)	Level Yellow Risk Reduction	Level Red (Remediation)
Follow SOPs for cleaning	✓	✓	✓
Follow SOPs for sanitizing (using EPA registered product per labeled instructions)	✓	✓	✓
Reinforce personal hygiene requirements	✓	✓	✓
Heighten training and reinforce cleaning and sanitizing procedures	✓	✓	✓
Reduce or eliminate bare hand contact with ready-to-eat foods	✓	✓	✓
Reduce or eliminate bare hand contact with foods as feasible	✓	✓	✓
Consider utilizing chlorine bleach solution (per CDC recommended concentration and contact time) or an EPA-registered disinfectant with claim specific to norovirus and utilize per label directions		✓	✓
Clean and disinfect 'high-touch' hard surfaces on a more frequent basis (3 or more times daily depending on usage): equipment handles, sinks, counter tops, door handles, paper towel dispenser, soap dispenser, handrails, drinking fountains, toilets, urinals, in-use utensils, phones, intercoms, computers and keyboards, etc.)		✓	✓



ADDITIONAL INFORMATION AND RESOURCES

Centers for Disease Control:

- ▲ <http://www.cdc.gov/ncidod/dvrd/revb/gastro/norovirus-foodhandlers.htm>

Environmental Protection Agency:

- ▲ <http://www.epa.gov/oppad001/chemregindex.htm>

FDA Food Code:

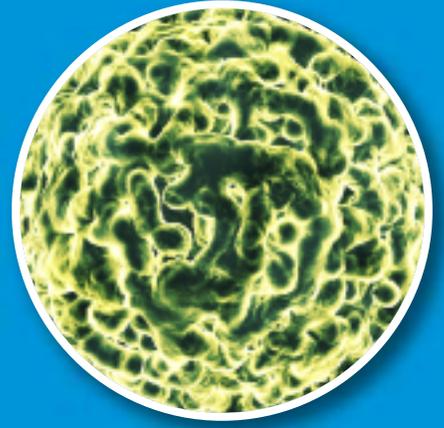
- ▲ <http://www.fda.gov/Food/FoodSafety/RetailFoodProtection/FoodCode/FoodCode2009/>

Other:

- ▲ Michigan Department of Community Health and Michigan Department of Agriculture; Viral Gastroenteritis Norovirus: http://www.michigan.gov/documents/Guidelines_for_Environmental_Cleaning_125846_7.pdf
- ▲ Southern Nevada Health District: <http://southernnevadahealthdistrict.org/health-topics/norovirus.php>.
- ▲ Taney County Health Department, Branson, Missouri: <http://www.taneycohealth.org/norovirus.php>

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