

<b>CRITERIA AND PROCEDURE</b>	
<b>BROAD SUBJECT: SANITATION AND SAFETY</b>	<b>NO: SS-06-03</b>
<b>TITLE: Disinfection of surfaces after contamination with viruses</b>	<b>EFFECTIVE DATE: August 21, 2009</b>

**PURPOSE OF THIS CRITERIA/PROCEDURE –**

Children attending schools in Georgia should be assured of a healthy environment any time they are on school property. Appropriate cleaning supplies should be available and used properly to control and kill biological agents, including bacteria and viruses.

In the event that surfaces may be contaminated with viruses such as a norovirus or influenza virus, proper cleaning and disinfection should be administered to control and kill the viruses. This Criteria and Procedure outlines the best practices to follow when disinfecting surfaces after possible contamination with these viruses.

## KEY TERMS AND DEFINITIONS –

**Aerosolization:** The creation of a fine mist or very small droplets.

**Chlorine Bleach:** Household bleach (5.25% or 6.00%–6.15% sodium hypochlorite depending on manufacturer) usually diluted in water at 1:10 or 1:100. Approximate dilutions are 1.5 cups of bleach in a gallon of water for a 1:10 dilution (~5,000 ppm) and 0.25 cup of bleach in a gallon of water for a 1:100 dilution (~600 ppm). Sodium hypochlorite products that make pesticidal claims, such as sanitization or disinfection, must be registered by EPA and be labeled with an EPA Registration Number.

**Cleaning:** Removal, usually with detergent and water or enzyme cleaner and water, of adherent visible soil, blood, protein substances, microorganisms and other debris from the surfaces, crevices, serrations, joints, and lumens of instruments, devices, and equipment by a manual or mechanical process that prepares the items for safe handling and/or further decontamination.

**Disinfectant:** Usually a chemical agent (but sometimes a physical agent) that destroys disease-causing pathogens or other harmful microorganisms but might not kill bacterial spores. It refers to substances applied to inanimate objects. EPA groups disinfectants by product label claims of “limited,” “general,” or “hospital” disinfection.

**Disinfection:** Thermal or chemical destruction of pathogenic and other types of microorganisms. Disinfection is less lethal than sterilization because it destroys most recognized pathogenic microorganisms but not necessarily all microbial forms (e.g., bacterial spores).

**Norovirus:** A group of viruses that are a common cause of foodborne illness and acute gastroenteritis that can strike quickly with force and make a person feel very sick, but which typically resolves within 2-3 days. Common symptoms include vomiting and diarrhea.

**Influenza (Flu) virus:** Any of three viruses of the genus *Influenzavirus* designated type A, type B, and type C, that cause influenza and influenzalike infections.

**Sanitizer:** To kill harmful microorganisms, including harmful bacteria and viruses.

## CRITERIA AND PROCEDURE –

It is important to understand that some sanitizers commonly used in food service are better than others when disinfecting surfaces after a possible contamination by norovirus or Influenza causing viruses. Chlorine based sanitizers have been found to be the most effective against these viruses (Barker, et al., 2004).

When sanitizing any hard, non-porous surface to kill norovirus or Influenza causing viruses, the following procedure should be used:

- Clean the surface with warm water and detergent.
- Disinfect with a 5000 ppm chlorine solution (1 ½ cups of 5.25% sodium hypochlorite (common bleach) in 1 gallon of water).
- For best results, the disinfectant should be allowed to stay on surfaces for at least 5 minutes and allowed to air dry.

Since this concentration of sodium hypochlorite is much stronger than the concentration recommended for food contact surfaces, immediately follow the above procedure when sanitizing a food contact surface with the following:

- Rinse food contact surfaces with clear water.
- Apply 200 ppm chlorine solution (1 tablespoon of 5.25% sodium hypochlorite in 1 gallon of water).
- Allow to air dry.

Recommendations from the Centers for Disease Control for environmental disinfection for viruses include the need to disinfect all heavy hand contact surfaces such as food preparation surfaces, self-service utensil handles, faucets, tables, chairs, counters, door handles, push plates, railings, elevator buttons, telephones, keyboards, vending machine keyboards, pens, pencils, casino chips, cards, slot machines, sports equipment, etc. Public restroom surfaces, including: faucet handles, soap dispensers, stall doors and latches, toilet seats and handles, and towel dispensers are also important heavy fecal contamination areas that require disinfection. When norovirus or flu virus contamination is suspected, cleaning procedures that increase the aerosolization of the virus should not be utilized, such as vacuuming carpets or buffing hard surface floors. Contaminated carpeting should be disinfected with a chemical disinfectant if possible, and then steam cleaned for a minimum 5-minute contact time at a minimum temperature of 170 degrees F. When chlorine cannot be used, use a disinfectant that is rated as antiviral as noted on the product label.

When a food worker or patron vomits in a public area or food preparation area, the vomit should be treated as potentially infectious material and should be immediately covered with a disposable cloth or arresting compound. A 5000 ppm chlorine solution (similar to the solution described above) should be poured over the area to reduce the potential airborne contamination. All individuals in the immediate area of the vomiting incident should be cleared from the area before the vomit is cleaned-up. Cleaning staff should use disposable face masks, gloves, and aprons when cleaning up after a vomiting incident. Paper toweling or other toweling used to clean-up liquid vomit should be immediately placed in a sealed trash bag and properly disposed.

Note: School foodservice preparation staff should never handle clean-up of any bodily fluids, including vomit, because of possible contamination of hands that will subsequently be used to prepare food. Ask custodians to do the clean-up if possible.

## REFERENCES -

Barker J, Vipond IB, Bloomfield SF. The effects of cleaning and disinfection in reducing the spread of Norwalk-like virus contamination via environmental surfaces. J Hosp Infect. 2004; in press.

Centers for Disease Control and Prevention, Norovirus in Healthcare Facilities Fact Sheet. Dec. 21, 2006,  
[http://www.cdc.gov/ncidod/dhqp/id\\_norovirusFS.html](http://www.cdc.gov/ncidod/dhqp/id_norovirusFS.html)

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Technical Report for State and Local Public Health Officials and School Administrators on CDC Guidance for School (K-12) Responses to Influenza during the 2009-2010 School Year, published August 7, 2009: Accessed August 21, 2009 at <http://www.cdc.gov/h1n1flu/schools/technicalreport.htm#routine>

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## **AUTHORITY – FEDERAL**

Chapter 7, Code of Federal Regulation Parts 210.9(b)(14), 210.13(a)&(c), 210.19(e).

## **AUTHORITY – STATE**

Georgia Department of Human Resources Rule 290-5-14