



# Human Rotavirus Cleaning and Disinfection Protocol

*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.*

## PREFACE

Rotavirus is the most common cause of severe diarrhea among children and the death of over 600,000 children annually worldwide. Rotavirus is highly contagious and is typically spread through fecal-oral transmission (i.e. ingestion of contaminated food and water, contact with contaminated surfaces like toys). Infection can occur even in places where good standards of hygiene are practiced.

This protocol has been developed based on current practices for cleaning and disinfection of enveloped and non-enveloped viruses.

## INFECTIOUS AGENT<sup>1</sup>

**NAME:** Human Rotavirus

**SYNONYM OR CROSS REFERENCE:** HRV, Sporadic viral gastroenteritis, severe viral gastroenteritis, non-bacterial gastroenteritis, rotaviral enteritis

**CHARACTERISTICS:** Reoviridae, icosahedral, RNA, non-enveloped virus

## HEALTH HAZARD

**PATHOGENICITY:** Infections the mature villous epithelium of the small intestine. Characterized by fever and vomiting, followed by watery diarrhea, occasionally associated with severe dehydrations and death in children. Repeated infections tend to be less severe than the original infection.

**EPIDEMIOLOGY:** Worldwide; there are 7 major serogroups: A – G, human strains belong primarily to serogroup A. The single most important cause of gastroenteritis in children (95% children worldwide are infected); peak infection occurs between 4 months and 3 years of age, adults are mostly asymptomatic. In temperate regions, the infections are most frequent during the winter and early spring with high incidence in day care settings. Major cause of nosocomial diarrhea of newborns and infants.

**HOST RANGE:** Humans, experimentally infected animals

**INFECTIOUS DOSE:** No known

**MODE OF TRANSMISSION:** Fecal-oral route; person-to-person; contact with respiratory secretions, contaminated water, food or other surfaces; contact with fomites

**INCUBATION PERIOD:** Usually 24 – 72 hours

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<sup>1</sup> PHAC, Material Safety Data Sheet – Infectious Substances: Human rotavirus. [www.phac-aspc.gc.ca/msds-ftss/msds86e.html](http://www.phac-aspc.gc.ca/msds-ftss/msds86e.html)



## Human Rotavirus Cleaning and Disinfection Protocol

### PREPARATION

Rotavirus is highly contagious. It is stable in the environment and can be transmitted through ingestion of contaminated water or food and contact with contaminated surfaces. Appropriate personal protection should be taken for those responsible for the decontamination of a room or area.

### PROTECTIVE BARRIERS

1. Disposable gloves. Gloves should be changed as required, i.e., when torn, when hands become wet inside the glove and between patient rooms.
2. Household gloves can be worn, but they must be discarded when the cleaning is complete.
3. Protective Eye wear (goggles, face shield or mask with eye protection)
4. Masks (surgical or procedural masks sufficient)
5. Gowns

### PRODUCTS

***Accelerated Hydrogen Peroxide Surface Disinfectant (sold as 7% Virox 5 Concentrate, Virox 5 Ready-To-Use and/ or Virox 5 Wipes, 7% PerCept Concentrate, PerCept RTU or PerCept Wipes, 7% Accel Surface Cleaner Disinfectant Concentrate, Accel RTU or Accel Wipes) and 0.5% Accelerated Hydrogen Peroxide Tuberculocidal Surface Disinfectant (sold as Accel TB TRU or Accel TB Wipes)***

1. Preparation of solution - Pre-mix and label from a controlled location 7% AHP Concentrate at a ratio of 1:16 (0.5% AHP).
2. Place mixed solution in either a labeled - flip top 1Litre bottle or a small hand bucket.
3. AHP RTU is ready to use (0.5% AHP).
4. AHP Wipes are ready to use (0.5% AHP).

### PRODUCT GERMICIDAL EFFICACY

All products listed above are based upon Accelerated Hydrogen Peroxide – and have a General Virucide Claim against Poliovirus Type 1, Sabin Strain, which includes inactivation of both enveloped and non-enveloped viruses. In addition to the General Virucide Claim, Accelerated Hydrogen Peroxide has been proven to show efficacy against HIV, Human Coronavirus, Human Rhinovirus, Human Rotavirus, Canine Parvovirus, Feline Calicivirus (Norovirus) and the H3N2 strain of Avian Influenza A.

### SUMMARY OF PROCEDURES

Apply solution to either surface or to cloth. Clean all horizontal surfaces in the room ensuring that the cloth is changed when soiled. Place used cloth in a marked plastic-lined waste receptacle. Disinfect all horizontal surface of the room by reapplying the AHP Solution and allowing for a 5-minute contact time. If using cloth & bucket method, once room has been cleaned discard all unused cleaning solutions before proceeding to the disinfection step. Allow to air dry or wipe dry if surfaces are still wet after the 5-minute contact time. Periodic rinsing of soft surfaces such as vinyl or naugahyde is suggested.

Bathrooms within a room should be cleaned last.

### Recommended Procedures for Housekeeping Activities Detailed Activity.

1. Gather all equipment, cleaning solutions and materials required to clean the room.



## Human Rotavirus Cleaning and Disinfection Protocol

2. **WASH** hands and put gloves prior to entering room. Personal protective equipment should be changed if torn or soiled and between patient rooms.
3. Place wet floor sign at the door entrance.
4. Pick up garbage in room and place in regular garbage bag.
5. Strip beds and place linen in regular linen bags. Put soiled linen in regular linen bins. If bins are more than half filled or if there is no bin, leave in the soiled utility room.
6. Basin, bedpan, urinal etc. to be placed in CSR bins in soiled utility room.
7. Visible or gross soil present and/or blood or body fluid spills must be removed prior to cleaning. [See Protocol for Cleaning & Disinfecting a Blood or Body Fluid spill.]
8. Clean all furniture, bed, night table, basin and all bathroom fixtures and all high touch areas, knobs, switches, call bells etc. and everything that is touched by the patient in the bathroom ensuring that clean cloths and solutions do not become contaminated (**NO DOUBLE DIPPING**) with the **AHP Solution**. Allow surfaces to remain wet for 30 seconds to achieve the 30-second Broad-Spectrum Sanitizing claim.
9. Disinfect all furniture, bed, night table, basin and all bathroom fixtures and all high touch areas, knobs, switches, call bells etc. and everything that is touched by the patient in the bathroom ensuring that clean cloths and solutions do not become contaminated (**NO DOUBLE DIPPING**) with the **AHP Solution**. Reapply the **AHP Solution** and allow surfaces to remain wet for 5 minutes to achieve the Bactericidal and Virucidal claim.
10. Remake beds and restock dispensers.
11. Spot wipe all walls, high to low with the **AHP Solution**.
12. Remove and replace cubicle curtains as appropriate.
13. Soiled rags should be placed in a regular plastic bag and then in regular soiled linen bin or the dirty utility room. Take all garbage bags to the appropriate disposal area.
14. Remove and discard gloves, **WASH** hands prior to leaving room.

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

Appropriate personal protective equipment should be worn for cleaning up a body fluid spill. 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.
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 the **AHP Solution** to spill – wait 30 seconds.



## Human Rotavirus Cleaning and Disinfection Protocol

4. Blot up the blood with disposable towels. Dispose of paper towel in plastic-lined waste receptacle.
5. Spray or wipe surface with the **AHP 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 Avian Flu virus 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.

### References:

Public Health Agency of Canada, Material Safety Data Sheet – Infectious Substances: Human rotavirus. [www.phac-aspc.gc.ca/msds-ftss/msds86e.html](http://www.phac-aspc.gc.ca/msds-ftss/msds86e.html)

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