



## Cleaning and Disinfection Protocol for Emergency Services Fire, Ambulance, Police, Search & Rescue

*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

The overall goal of infection prevention practices is to eliminate the risk of the transmission of pathogens between patients and between patients and the health care worker. The following recommendations should be implemented when cleaning and disinfecting. These procedures follow the Spaulding Classification of the level of care required for surfaces and instruments.

Non-critical equipment is devices or equipment that comes in contact with intact skin but not mucous membranes. Intact skin acts as an effective barrier to most microorganisms. Examples of non-critical equipment are bedpans, blood pressure cuffs, and patient care equipment like keyboards and monitors. There is virtually no risk of transmitting infectious agents to patients via non-critical items; however, these items could potentially contribute to secondary transmission by contaminated hands of Health Care Workers or by contact with medical equipment that will subsequently come in contact with patients.

Contaminated instruments classified as semi-critical or critical should be stored in a separate container/bag until back to the station or hospital. Contaminated instruments should be cleaned in the dirty zone, preferably in a utility sink. Cleaning removes soil and body materials, e.g. blood, from instruments, equipment and environmental surfaces. Cleaning must occur as an integral first step before disinfection or sterilization. Once cleaned, the instruments should be High Level Disinfected, Chemically Sterilized or Mechanically Sterilized according to Spaulding classification.

### PROTECTIVE BARRIERS

1. Disposable gloves. Gloves should be changed as required, i.e., when torn, when hands become wet inside the glove or when moving 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

**High Level Disinfection:** *PREVENTION a 2% Accelerated Hydrogen Peroxide*  
**Chemical Sterilization:** *Accel CS 20 a 7% Accelerated Hydrogen Peroxide*  
**Instrument Cleaning:** *Accel Wash a 3% Stabilized Hydrogen Peroxide*  
**Environmental Surfaces:** *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 RTU or Accel TB Wipes)*

1. PREVENTION and Accel CS 20 are ready-to-use solutions.
2. Preparation of Accel Wash - Pre-mix and label from a controlled location 3% SHP Concentrate at a ratio of 1:128 into a wash basin or sonicating bath.
3. Preparation of solution - Pre-mix and label from a controlled location 7% AHP Concentrate at a ratio of 1:16 (0.5% AHP).



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4. Place mixed solution in either a labeled - flip top 1 Litre bottle or a small hand bucket.
5. AHP RTU is ready to use (0.5% AHP).
6. AHP Wipes are ready to use (0.5% AHP).

### PRODUCT GERMICIDAL EFFICACY

Accel CS20 is based upon patented Accelerated Hydrogen Peroxide (AHP). Accel CS20 is a 7% AHP High Level Disinfectant and Chemosterilant solution that carries a 20-minute Fungicidal, Tuberculocidal claim and Sporicidal claim. Accel CS20 has a 16-month shelf life with a 14-day reuse claim.

PREvention is based upon patented Accelerated Hydrogen Peroxide (AHP). PREvention is a 2% AHP High Level Disinfectant solution that carries a 5-minute Bactericidal, Virucidal, Fungicidal and Tuberculocidal claim. Additionally, PREvention is also an approved Chemosterilant with proven Sporicidal efficacy in 6-hours. PREvention has a 12-month shelf life with a 14-day reuse claim.

All Environmental Surface Products listed above are based upon Accelerated Hydrogen Peroxide – and have a Broad-Spectrum Sanitizing claim against vegetative bacteria, a Bactericidal claim against gram negative and gram positive vegetative bacteria as well as 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.

The Tuberculocidal Surface Disinfectant (Oxivir Tb, Carpe Diem Tb and Accel TB) also carries a Fungicidal and Tuberculocidal claim.

### SUMMARY OF PROCEDURES FOR ENVIRONMENTAL SURFACES AND NON-CRITICAL DEVICES

Apply AHP 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 with double dipping, once room has been cleaned discard all unused cleaning solution before proceeding to the next room. Allow surfaces 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 as well as equipment regularly handled by hand.

### Recommended Procedures for Cleaning and Disinfection of Environmental Surfaces and Patient Care Equipment

Contaminated patient care devices should be clearly identified and kept separate from clean patient care devices. Patient care devices include: Blood Pressure Cuffs, Stethoscopes, Thermometers, Glucometers, Otoscopes, O2 Sats, and Stretchers etc. The contaminated devices should be cleaned in the dirty zone. Cleaning removes soil and body materials (e.g. blood, organic soils) and must occur as an integral first step before.

1. Gather all equipment, cleaning solutions and materials required to clean the patient care devices.
2. **WASH** hands and put gloves prior to cleaning the devices. Personal protective equipment should be changed if torn or soiled.
3. 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.]



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4. Clean all surfaces of the patient care equipment or devices. Where appropriate, dismantle the devices to ensure that all surfaces can be cleaned using the **AHP Solution**. To ensure that cross contamination does not occur use clean cloths for each device to be cleaned. If using an open bucket system, ensure that solutions do not become contaminated (**NO DOUBLE DIPPING**). Allow surfaces to remain wet for 30 seconds to achieve the 30-second Broad-Spectrum Sanitizing claim.
5. To disinfect all surfaces of the patient care devices, reapply the **AHP Solution** and allow surfaces to remain wet for 5-minutes to achieve the Bactericidal, General Virucide, Fungicidal and Tuberculocidal claim.
6. Soiled rags should be placed in a bag for laundering. Disposable cloths should be disposed as regular waste in garbage bags.
7. Remove and discard gloves, **WASH** hands.

### SUMMARY OF PROCEDURES FOR SEMI-CRITICAL DEVICES

Semi-critical disinfection involves disinfection of items that come in contact with mucous membranes and intact skin, but not with internal, natural sterile areas of the body. Cleaning of semi-critical items/equipment is an important step in the disinfection process to ensure the disinfecting of the items/equipment will be successful. Cleaning must be thoroughly done before “processing” because organic material may protect microorganisms from the disinfection process.

### Recommended Procedures for Cleaning and Disinfecting of Semi-Critical Devices

1. Cleaning should take place between each device/equipment usage. Items will be disassembled (as appropriate) and thoroughly cleaned.
2. Semi-critical items may be contaminated with dried or wet sputum and/or blood and should be cleaned using a detergent such as Accel Wash (Diluted 1:128 or 32 mL Accel Wash Concentrate to 4 Litres water), rinsed, and dried prior to using PREvention for High Level Disinfection.
3. High Level Disinfection consists of immersing the device/equipment in the PREvention solution for 5-minutes.
4. Once the 5-minute High Level Disinfection contact time has passed, the device/equipment should be removed from the PREvention solution using clean, disinfected tongs or forceps.
5. The disinfected device/equipment should be thoroughly rinsed using sterile water when practical, otherwise potable water is acceptable for semi-critical devices not intended for use on immunocompromised patients or potentially immunocompromised patients based on institutional procedures (ie. high-risk populations).
6. Following removal from PREvention solution, thoroughly rinse device/equipment by immersing it completely in a large volume of water keeping the device/equipment totally immersed for a minimum of 1-minute repeating this step for 3 consecutive times.
7. Manually flush all lumens.
8. Remove device/equipment and discard the rinse water. Always use fresh water for each rinse. Do not reuse the water for rinsing or any other purposes.
9. Following the rinsing step the device/equipment should be dried and stored in a suitable container (ie. clear polyethylene bag) for future use.



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### SUMMARY OF PROCEDURES FOR CRITICAL DEVICES

Critical instruments are those items that enter sterile tissues, including the vascular system and present a high risk of infection if the item is contaminated with any microorganisms, including bacterial spores. Reprocessing critical items involves meticulous cleaning followed by sterilization. Cleaning of critical items/equipment is an important step in the disinfection process to ensure the disinfecting of the items/equipment will be successful. Cleaning must be thoroughly done before “processing” because organic material may protect microorganisms from the disinfection process.

### Recommended Procedures for Cleaning and Disinfecting Critical Devices

1. Cleaning should take place between each device/equipment usage. Items will be disassembled (as appropriate) and thoroughly cleaned.
2. Critical items may be contaminated with dried or wet sputum and/or blood and should be cleaned using a detergent such as Accel Wash (Diluted 1:128 or 32 mL Accel Wash Concentrate to 4 Litres water), rinsed, and dried prior to using Accel CS20 for Chemical Sterilization.
3. Chemical Sterilization consists of immersing the device/equipment in the Accel CS20 solution for 20-minutes.
4. Once the 20-minute Chemical Sterilization contact time has passed, the device/equipment should be removed from the Accel CS20 solution using clean, disinfected tongs or forceps.
5. The disinfected device/equipment should be thoroughly rinsed using sterile water.
6. Following removal from Accel CS20 solution, thoroughly rinse device/equipment by immersing it completely in a large volume of water keeping the device/equipment totally immersed for a minimum of 1-minute repeating this step for 3 consecutive times.
7. Manually flush all lumens.
8. Remove device/equipment and discard the rinse water. Always use fresh water for each rinse. Do not reuse the water for rinsing or any other purposes.
9. Following the rinsing step the device/equipment should be dried and stored in a suitable container (ie. clear polyethylene bag) for future use.

### 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.



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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.

### Instructions for Confirmatory Testing of PREvention (2% AHP)

The Accelerated Hydrogen Peroxide Test Strip 2% (Part No. AHP2) should be used for confirmatory testing. These strips are easy to use dip-and-read reagents strips for a pass or fail determination of the hydrogen peroxide concentration in the PREvention solution.

1. Remove a test strip and immediately close the container.
2. Dip the test strip into the PREvention solution to be tested for 1-second ensuring that the reaction zone is completely wetted.
3. Remove the test strip and shake off excess liquid.
4. Wait for 60-seconds then compare the reaction zone with the colour scale.

**NOTE:** The purpose of confirmatory testing is not to extend the reuse life beyond the 14-day claim. Should the test strip show that the PREvention solution still meets the targeted level of hydrogen peroxide the product **MUST** still be disposed.

### Instructions for Confirmatory Testing of Accel CS20 (7% AHP)



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The Accelerated Hydrogen Peroxide Test Strip 7% (Part No. AHP7) should be used for confirmatory testing. These strips are easy to use dip-and-read reagents strips for a pass or fail determination of the hydrogen peroxide concentration in the PREvention solution.

1. Remove a test strip and immediately close the container.
2. Dip the test strip into the Accel CS20 solution to be tested for 1-second ensuring that the reaction zone is completely wetted.
3. Remove the test strip and shake off excess liquid.
4. Wait for 35-seconds then compare the reaction zone with the colour scale.

**NOTE:** The purpose of confirmatory testing is not to extend the reuse life beyond the 14-day claim. Should the test strip show that the Accel CS20 solution still meets the targeted level of hydrogen peroxide the product **MUST** still be disposed.

### References:

Provincial Infectious Diseases Advisory Committee, Best Practices for Cleaning, Disinfection and Sterilization in All Healthcare Settings, 2006

Public Health Agency of Canada, Infection Control Guidelines for Hand Washing, Cleaning, Disinfection and Sterilization in Healthcare, Volume 24S8, 1998