

TO BE EDITED

Definitions

What is the difference between Cleaning, Sanitizing, Disinfection and Sterilization?

Cleaning is the physical removal of foreign material and organic material. Cleaning physically removes rather than kills microorganisms. It is accomplished with water, detergents, and mechanical action.

Sanitizing lowers the numbers of germs on surfaces or objects to a safe level, as judged by public health standards or requirements. This process works by either cleaning or disinfecting surfaces to lower the risk of spreading infection.

Disinfection is the inactivation of disease-producing microorganisms. Disinfection does not destroy bacterial spores.

Sterilization is the level of reprocessing required when processing critical medical equipment/devices (equipment or devices that enter sterile tissue). Sterilization results in the destruction of all forms of microbial life including bacteria, viruses, spores and fungi.

What is a One-Step Cleaner Disinfectant?

One Step Disinfectant Cleaner terminology is an [EPA \(Environmental Protection Agency\) / Health Canada](#) term that is used to describe a disinfectant that has been tested in a soil load (bovine serum) and maintains its ability to kill pathogens. A one step disinfectant cleaner does not mean you do not need to clean before disinfection. Cleaning does not just mean the removal of gross soil (large clumps, spills etc.) Removal of large clumps, spills etc. should be done prior to cleaning. A One Step Disinfectant Cleaner means you can use the disinfectant product to clean a surface effectively. The cleaning ability of one step disinfectant cleaners may vary widely. Due diligence is required. Disinfectant chemistries that are not registered as one step disinfectant cleaners should not be used during the cleaning step. The intent of cleaning and the use of an approved cleaning technology is not only to remove soils that can become food for pathogens but also to remove large amounts of pathogens that may be present on the surface. The more pathogens removed during cleaning, the more likely the surface is disinfected during the disinfection step.

For additional information as to why cleaning and disinfection play a major role in today's farming and aquaculture read this article by Jean Barbeyrac: [READ ARTICLE >](#)

What is the difference between Ready-to-use (RTU) Liquid, Wipes, and Concentrate?

Ready-To-Use Liquid is specially formulated to be the most convenient - No mixing or measuring required.

Wipes use Ready-To-Use liquid on pre-saturated non-woven, poly-propylene wipe material with a product formulation that is ready to use once opened. They come in a dispensing canister that easily tears each wipe adding to the already convenient Ready-To-Use liquid. Our wipes are also formulated to help aid in the cleaning process by being able to pick up soils on surfaces saving your facility time and money.

Concentrate liquid is the product with the most diversity giving the user the options to dilute at specific ratios based on the type of application they require.

AHP General

What is Accelerated Hydrogen Peroxide?

AHP is a patented synergistic blend of commonly used, safe ingredients that when combined with low levels of hydrogen peroxide dramatically increase its germicidal potency and cleaning performance. AHP is composed of Hydrogen Peroxide, Surface Acting Agents (surfactants), wetting agents (a substance that reduces the surface tension of a liquid, causing the liquid to spread across or penetrate more easily the surface of a solid) & chelating agents (a substance that helps to reduce metal content and/or hardness of water). The ingredients are listed on the EPA and Health Canada Inerts lists and/or the FDA Generally Regarded as Safe List (GRAS). All chemicals used in the formulation of AHP are commonly found in commercial and industrial cleaners and disinfectants.

What is the difference between AHP and the Hydrogen Peroxide that can be purchased at a drug store?

Hydrogen Peroxide purchased from a Drug Store is a 3% diluted solution (3% hydrogen peroxide, 97% water). Hydrogen Peroxide in this form is known to be very unstable with a relatively short shelflife. For years scientists have worked to find a way to include other ingredients in this water and hydrogen peroxide solution in order to increase stability and create a viable and effective product. AHP is a formulation of Hydrogen Peroxide, surfactants and other inert ingredients which results in a stabilized and a dramatically more effective disinfectant and cleaner. AHP (at the in-use dilution) has 1/6th the active ingredient compared to the drug store variety but results in better cleaning efficacy and faster germicidal performance.

Many cleaning and/or disinfecting products on the market have pleasant smells such as citrus and lime. Why doesn't AHP have a scent?

The main reason for creating a scent-free product is to avoid the masking of odours that can be created by those things you actually want to eliminate from the environment. The smell of many cleaners and disinfectants have the effect of masking the odour of the chemical itself and ultimately the odour in the room or facility. Clean really has no fragrance. It is the absence of smell due to the absence of any odour causing materials. When you clean and disinfect with AHP there isn't a scent to mask the cleanliness. Your room or facility will eventually just smell clean. Additional fragrances often contain Volatile Organic Compounds (VOC's) to cleaning and disinfectants is also one of the leading causes of fragrance sensitivity and negative affects to indoor air quality. By creating a product that is scent free there are fewer negative reactions by

end users, fewer complaints by occupants of the facility using AHP and therefore, from a Occupational Health & Safety standpoint, a better technology to use.

What colour and scent does AHP have?

AHP does not contain any dyes or fragrances for health and safety and environmental preference reasons. Dyes can have both a negative impact from an environmental perspective when released into the environment as well as a negative impact to health and safety of a product as dyes are frequently the source to adverse or allergic reactions to products.

With respect to fragrance, most fragrances commonly used are classified as VOCs; therefore, in general we do not add fragrances to AHP. AHP disinfectant formulations are considered VOC free which attribute to a superior health and safety profile to ensure protection of animals, staff and the environment. Also, many healthcare facilities and many governmental buildings enforce no scent policies because of the increasing existence of VOC sensitivities.

Can you use AHP products in the laundry?

AHP products are registered disinfectants for the use on hard, non-porous surfaces. Therefore AHP products are not formulated for laundry use and should not be applied in your laundry machines.

How long can you use diluted concentrate?

In the US, if diluted and kept in a closed container (such as a spray bottle) AHP products are good for 90 days.

In Canada, if diluted and kept in a closed container (such as a spray bottle) AHP products are good for 30 days.

If the diluted product is kept in an open container (such as a mop bucket) we recommend a daily change or until the liquid becomes contaminated or cloudy.

Claims

Are all disinfectants more or less the same?

Not at all. In the United States and Canada, you'll find more than 8,000 registered disinfectant products for sale, and there are several variations between them. Among the six most common chemistries used for disinfection, especially in medical settings, you'll find vast differences in the spectrum of efficacy, concentrations, contact times, label language, and personal protection needed for proper usage. In addition, many disinfectants require you to clean a surface first with a product containing detergents before you can use your chosen disinfectant.

Doesn't a disinfectant by nature, have to be toxic to do its job properly?

NOT ANYMORE! Historically, this was true. In the past 10-15 years, however, companies have been working to bring safer and more environmentally sustainable disinfectants to market. If you're using an older type of disinfectant product, be sure to provide training on protocols for safe use. Safety Data Sheets (SDS) are your best resource to learn about the toxicity and risks associated with using the product. See Section 2 and Section 11 on the SDS for details. Some products do indeed contain chemicals that are known carcinogens, known respiratory irritants (causing occupational asthma or chemical pneumonia), known skin sensitizers, known to release volatile organic compounds (leading to poor air quality), or known to contain nonylphenol ethoxylates (hormone-mimicking agents that can act as endocrine disruptors in the body).

Can a disinfectant kill on contact?

NEVER! All disinfectants have a contact time that must be followed. The contact time is the amount of the time the surface must remain wet for disinfection to be achieved. Contact times can range anywhere from 30 seconds to 10 minutes, which means you always have to read the product label before using the disinfectant.

Do we have a claim against Ringworm?

Ringworm is a fungal infection caused by the fungus tinea corporis. Therefore [Rescue / Prevail](#) being a fungicidal product, would be effective in eliminating this fungus. We have multiple peer reviewed studies conducted by Dr. Moriello which tested the efficacy of AHP against ringworm, which resulted in positive outcomes.

To review the studies please see the following links:

<http://www.ncbi.nlm.nih.gov/pubmed/25763290>

<http://www.ncbi.nlm.nih.gov/pubmed/24617995>

<http://www.ncbi.nlm.nih.gov/pubmed/24102835>

However, it is also important to understand how this infection is spread. Typically ringworm is spread via direct contact with an infected person or animal and is rarely spread indirectly via environmental surfaces. Diligent cleaning and disinfection with an effective disinfectant cleaner such as Rescue will greatly reduce the risk of any potential environmental transmission.

Do we have a claim against PEDv?

Yes we have an efficacy claim for PEDv.

Do we have a claim against Parvovirus?

A number of AHP products do have efficacy claims for Parvovirus. Parvovirus is a non-enveloped virus. Non-enveloped viruses are more difficult to kill from a disinfectant efficacy perspective. In trying to determine what product would be considered most effective we recommend looking for a product that carries a number of claims against non-enveloped viruses such as Poliovirus, Adenovirus, Rhinovirus, Rotavirus and Norovirus. Accelerated Hydrogen Peroxide® (AHP®) products have shown excellent efficacy against numerous non-enveloped viruses and have excellent health and safety profiles. So while some products may not have a

specific claim for Parvovirus, we expect AHP to have excellent efficacy against this pathogen of concern.

Here is our Cleaning and Disinfection Protocol for Non-Enveloped Virus: [DOWNLOAD PDF >](#)

Do we have a claim against Avian Influenza?

Avian Influenza is an enveloped virus (easily inactivated by chemical disinfection). In the US, in accordance to the EPA based on available scientific information, a product currently registered against a strain of Influenza A virus will be effective against other influenza A virus strains on hard, non-porous surfaces. Our US AHP products have claims against several strains of Influenza A including Avian Influenza.

In Canada, AHP products have been tested against Poliovirus which allows them to make a general virucide claim in accordance to Health Canada Guidance Document, Disinfectant Drugs (Revision 2007/08/15). This means the product is expected to be effective against most enveloped and non-enveloped viruses. In addition, this product has been tested and proven effective against Influenza Virus PR8, which would be considered as surrogate for Avian Influenza.

Here is our Cleaning and Disinfection Protocol for Enveloped Viruses: [DOWNLOAD PDF >](#)

Do we have a claim against Equine Influenza?

Equine Influenza is an enveloped virus (easily inactivated by chemical disinfection). In the US, in accordance to the EPA based on available scientific information, a product currently registered against a strain of Influenza A virus will be effective against other influenza A virus strains on hard, non-porous surfaces. Our US AHP products have claims against several strains of Influenza A therefore we would expect excellent efficacy against Equine Influenza.

In Canada, AHP products have been tested against Poliovirus which allows them to make a general virucide claim in accordance to Health Canada Guidance Document, Disinfectant Drugs (Revision 2007/08/15). This means the product is expected to be effective against most enveloped and non-enveloped viruses. Prevail AHP products have claims against several strains of Influenza A therefore we would expect excellent efficacy against Equine Influenza.

Here is our Cleaning and Disinfection Protocol for Enveloped Viruses: [DOWNLOAD PDF >](#)

Is AHP effective against parasites such Giardia, Coccidia, Cryptosporidium, Malaria?

According to EPA and FDA, No disinfectant is allowed to say they are effective against parasites. However, due to AHP's surfactant package and superior cleaning abilities, all AHP products have the ability to help removes oocytes (parasite eggs) from surfaces and in turn reduce the chance of it spreading.

Currently, Health Canada does not approve any disinfectant claim effective against parasites. However, due to AHP's surfactant package and superior cleaning abilities, all AHP products

have the ability to help removes oocytes (parasite eggs) from surfaces and in turn reduce the chance of it spreading.

What does Gold Standard Claims mean?

There are certain viruses and bacteria which have resistance to environmental germicides and considered very hardy viral pathogens. Poliovirus is an example of a very hardy pathogen. Salmonella, Staphylococcus aureus, and Pseudomonas aeruginosa are examples of bacterial pathogens. This is why Health Canada publishes guidelines for the determination of germicidal claims stating if you can claim killing these difficult to kill pathogens you have achieved “Gold Standard” in disinfection and we can assume if the product can disinfect these tougher organisms than it can kill all easier to kill pathogens without having testing conducted. It is also important to note that A General Virucide claim is issued only if the contact time for bactericidal claims equals the contact time for Polio. In other words, you cannot make a Polio claim if the contact time is 10 minutes and the bactericidal claim is 5 minutes.

What does Soft Surface Sanitizing Claim mean?

Soft surfaces or textiles include linens, towels, curtains, clothing, as well as upholstery and carpeting. Our product with a soft surface sanitizing claim is [Rescue / Prevail](#) RTU. Sanitizing lowers the number of bacteria on surfaces but does not eliminate them completely.

At this time [the EPA \(Environmental Protection Agency\) / Health Canada](#) does not allow for the approval of disinfection claims against viruses on soft surfaces such as carpets or bedding. AHP could be used as a spot cleaner on areas that animals have defecated, urinated or vomited on. Assuming that the area is wetted thoroughly we would expect that there would be some inactivation against viruses.

Storage and Disposal

How do you properly store the product?

Keep container tightly closed in a dry and well-ventilated place. Store in an area that is: out of direct sunlight and away from heat and ignition sources. Avoid storage at elevated temperatures.

What are the best practices for reusing bottles?

When diluting into a spray bottle, the best practice would be to rinse the bottle out with fresh water and let it air dry before refilling. We recommend to rinse the bottle with water followed by rinsing with AHP. The bottle should be allowed to dry before refilling with diluted solution to ensure proper dilution.

In the case of transferring from a larger to a smaller container there are some key considerations. First, it is important to ensure that the lot number and expiry date of the solution is indicated on the bottle. This is to help ensure that expired product is not being used and that in the case any

concerns arise from the use of the product, the product can be traced through the lot number. Secondly, as mentioned above, we recommend that the container the product is being transferred into is rinsed with water, followed by rinsing with AHP and then allowed to air dry before re-filling. This cleaning process ensures that there are no contaminants in the bottle between re-fills. Lastly, it should be noted that bottles should never be topped up with disinfectant but should only be re-filled once all the solution has been used and the bottle has been cleaned.

How do you store the product in cold weather?

Cold winter days bring a challenge for the outdoor application of liquid disinfectants due to the fact that most disinfectant products are aqueous and freeze around 0°C. To use liquid disinfectants during winter months when temperatures are below 0°C, an anti-freezing agent is needed to prevent them from freezing under such conditions. The freezing point temperature of Accelerated Hydrogen Peroxide® (AHP®) may be reduced by the utilizing propylene glycol in conjunction with water as the diluent. The addition of propylene glycol does not impact efficacy of the 7% AHP Concentrate. Their addition to the formulation in fact improves the antimicrobial property of the disinfectant formulations (1-5).

How do you dispose of empty bottles?

(USA) Nonrefillable container. Do not reuse or refill. Wrap empty container and put in trash, or offer for recycling if available.

(Canada) Plastic bottles and containers that bear the 1 or 2 plastic resin codes, also called SPI codes, can be recycled. (SPI stands for Society of the Plastics Industry). Some local recycling programs also accept plastic products with resin codes 3-7 (check with local waste haulers for community-specific information). Most plastic beverage containers with resin codes 3-7 can be returned to recycling centers for California Refund Value—just check the label for CRV, CA Cash Refund, or similar wording to determine if you are eligible for a refund. Our AHP product containers all carry a number 2 at the bottom of the bottle so there should be no problem. The empty AHP containers should be rinsed out 3 times and then recycled based on your municipal, provincial, and federal regulations.

How do you dispose of liquids and wipes?

Ready-To-Use liquid products can be poured down the drain with running water and leaving the water running for an extra 30 seconds.

To dispose of the RTU Wipes we recommend squeezing out the remaining liquid in the wipes down the drain with running water, then the dehydrated wipes may be recycled.

Concentrate products must first be diluted, then can be poured down the drain with running water, leaving the water running for an extra 30 seconds.

Compatibility

What is AHP Approved on?

All chemistries have their unique challenges. No disinfectant is compatible with 100% of all materials. Additionally, incompatibility of a disinfectant with a given substrate is rarely an immediate issue, but rather something that is apparent over time. The extensive testing that has been conducted using AHP, in house by Virox, through our partners and distributors and externally by medical device and equipment manufacturers, has found that AHP is compatible with most commonly used materials. In general, AHP shows excellent compatibility with all hard, non-porous surfaces such as stainless steel, laminate, porcelain, ceramics, high & low density plastics, acrylics, resins and silicon rubber etc. AHP is not recommended for regular exposure to copper, brass, anodized aluminum, and carbon steel. In some testing we have also found that AHP should not be used regularly on some acetal (stress points such as seams may weaken over time). If there is exposure, rinsing and wiping dry will help slow down wear for all surfaces not recommend for regular contact.

With respect to soft surfaces such as vinyl, Naugahyde or polyurethane, it is recommended by manufacturers of these materials that disinfectants of any kind when used on such surfaces should be rinsed following the cleaning and disinfection step. Disinfectants are usually complicated chemical solutions and can be absorbed readily by porous materials. Porous materials in themselves, especially soft engineered plastics, are more complicated in their make-up (solvents-plasticizers, fire retardants, coatings etc.) and therefore have increased risks of chemical reactions that may affect material integrity plasticizers are used to give plastics their stretch.). In the multitude of testing that AHP has been subjected to, compatibility with such surfaces has generally been excellent. Compatibility issues that have arisen with these materials have been resolved through compromise, such as raising the dilution rate, change of practice to avoid pooling (oversaturation), rinsing and/or drying.

For a comprehensive list of materials compatibility please read: [General Materials Compatibility Reference Chart >](#)