ENGINEERING REVOLUTIONARY DISINFECTANTS for the War Against Microbes
Since the beginning of time, human’s most lethal enemy has been the Pathogen. Today, we are still at risk of contracting infectious diseases in healthcare facilities, dental clinics, spas, cruise ships and other public spaces. Even animals in farms, veterinary clinics, and shelters are not immune.

...and yet the very chemicals being used to fight pathogens are threatening our health & safety and damaging our environment.
Only Accelerated Hydrogen Peroxide® combines unmatched efficacy with environmental integrity and application safety.
Engineering Revolutionary Disinfectants for the War Against Microbes
Waging A War
On Pathogens

The mission of Virox Technologies Inc. is to equip the entire spectrum of global markets with state-of-the-art antimicrobial technology in the war against germs. Our company is dedicated to the development, optimization, and adaptation of a fundamentally new approach to this challenge — an approach which has been validated and endorsed by the scientific community and which has been adopted by market leaders in a broad range of industries.

We believe that there is no longer the need to compromise on efficacy of application, or trade off either personal safety or environmental integrity by harnessing the disinfecting powers of hydrogen peroxide. Our disinfectant technology is a synergistic blend of commonly used safe ingredients that appear on the EPA inerts list and the FDA’s GRAS list.

For the first time, Virox has developed a new standard of performance. The science is here, and the time is NOW.

As a research-driven company, Virox currently sells house branded and private label products, and partners with market leaders in an array of industries, who have all validated the scientific claims and market acceptance of our patented technology.

Virox is committed to innovating, developing and improving peroxide based, environmentally sustainable cleaners and disinfectants that allow our customers to reduce their environmental impact when consuming such necessary products.

“A focus on human and environmental sustainability is a legacy we will pass on to future generations.”

Randy Pilon, President & CEO
One disinfectant technology that combines unmatched efficacy with application safety? Now that’s a Deliberately Different™ way of thinking.
The discovery of a unique and innovative chemical synergy lead to the development of what would become known as Accelerated Hydrogen Peroxide® or AHP®. It represented a major break-through in disinfectant technology that was not only different but “deliberately different” — and would soon prove to be a game-changer.

Today

Virox Technologies Inc. has become an industry leader in infection prevention and control for a diverse number of market segments including: animal health, professional beauty, laboratory, healthcare, dental, industrial & institutional markets, hand care, consumer products, mold remediation, and medical device disinfection and sterilization. AHP is available in more than 60 countries with over 9 patents and many more pending.

With continual research & development resulting in 10 issued patents and several more pending, Virox has become a valuable partner to our licenced companies.

Virox has received many awards in recognition of our economic and environmental sustainability. Some highlights include:

- **EPA Safer Choice Partner of the Year Award for Innovation** by the Safer Choice Design for the Environment;
- **Champion Status for the Safer Detergents Stewardship Award (SDSI)** awarded by the EPA’s Design for the Environment (DfE);
- **Canadian/American Business Council Award** – Virox and its strategic partner Diversey were awarded the prestigious Business Achievement Award for their collaboration in developing and distributing a safe and environmentally friendly hydrogen peroxide-based disinfectant;
- **In 2013, Virox Technologies achieved LEED® Silver certification** from the U.S. Green Building Council (USGBC), becoming the first chemical manufacturer capable of not just developing EcoLogo/UL and Green Seal Certified products, but manufacturing them in a LEED-certified facility.

See page 16 for a comprehensive list of awards.
When you use AHP® products, you are keeping harsh toxic chemicals from being poured down the drain. Accelerated Hydrogen Peroxide® breaks down into water and oxygen resulting in no environmental impact. Now that’s Green.
It has long been known that hydrogen peroxide can kill pathogens without being harmful to the user. However, this remarkable chemical was not considered stable enough to be practical as the foundation for a system of commercial disinfectant cleaners. Virox scientists changed all that by developing Accelerated Hydrogen Peroxide®/AHP® — a stable disinfecting solution with enhanced germicidal activity that is safe for users and the planet.

**Accelerated Hydrogen Peroxide/AHP**

Virox Technologies Inc. has pioneered the broader acceptance of Hydrogen Peroxide based products with its patented technology known as Accelerated Hydrogen Peroxide. AHP is a synergistic blend of commonly used, safe ingredients that when combined with low levels of hydrogen peroxide produce exceptional potency as a germicide and performance as a cleaner. These claims are all backed with governmental registrations and extensive third party analysis and testing. Powerful disinfectants are easy to formulate, however they are often toxic. AHP is unique as it achieves the ideal balance between safety and efficacy.

**An Approved & Validated Technology**

- The benefits and efficacy of AHP have been validated by peer reviewed clinical studies conducted by scientific organizations and third party researchers and labs that are recognized by third party researchers and labs in Canada, the U.S., Europe, and Asia.
- AHP has received approvals from Health Canada, US EPA (Environmental Protection Agency), US FDA (Food and Drug Administration), EU (European Union), New Zealand, Australia and 40 other countries.
• AHP® has been the subject of more than 45 favourably written peer reviewed scientific studies.
• After rigorous due diligence, Virox’s Global Strategic Alliance Partners, who serve many industries, selected AHP® as their infection prevention platform, which is a testimony to the strength of the intellectual property and sustainability of the technology.

Driven by Research, Validated by Science

SURFACES

Boyce, J. et al. (2017) Prospective cluster controlled crossover trial to compare the impact of an improved hydrogen peroxide disinfectant and a quaternary ammonium-based disinfectant on surface contamination and healthcare outcomes. *American Journal of Infection Control*. 2017;45:1006-10


DEVICES


HANDS/TOPICAL


The Evolution of Disinfection

**1920’s**
Chlorine Bleach products made commercially available, however are unstable and are poor cleaners.

**1950’s**
Alcohols continue to be used for disinfecting. Phenolic disinfectants change little over the next 50 years.

**1960’s**
Antibiotic resistant microbes start to appear. Aldehydes for medical device disinfection is introduced. Triclosan is introduced in hand washing products.

**1970’s**
Quaternary ammonium compounds introduced, however, became known to have environmental and broad spectrum disinfection challenges.

**1980’s**
Antibiotic resistant Staphylococcus aureus appears. Health risks working with phenolics are identified and restrictions for use implemented.

**1990’s**
New strains of antibiotic-resistant pathogens continue to appear. Special handling requirements for Glutaraldehyde implemented.

**2000’s**
The next generation technology utilizing Accelerated Hydrogen Peroxide®/AHP® is introduced. FDA bans Triclosan.
The Superiority of AHP®

AHP formulations are not mere substitutes for current chemistries, they represent the next generation in disinfectant technology with demonstrable superiority.

AHP Products are Distinguished by these Key Essential Traits

Balance

Efficacy & Safety - AHP products are more than just tough on leading pathogens of concern including: spores, mycobacterium, fungi, enveloped and non-enveloped viruses, and vegetative bacteria, they’re also easy on users, materials and devices.
Speed

Contact Time – AHP® is fast acting with short contact times that ensure user compliance with label claims.

Cleaning

AHP is a one step disinfectant cleaner ensuring confidence surfaces are properly disinfected.

Dirty Surfaces – AHP cleans while it disinfects and disinfects while it cleans in one step.

Compatibility

AHP has excellent compatibility with most surfaces thus protecting customer assets.

“With its contact time of 1 minute or less, AHP improved our efficiency in turning rooms allowing us to help more patients.”

Dr. Julie Reck
AHP is among those very rare disinfectant technologies that make every effort to minimize worker and patient exposures to harmful chemicals.

Dr. Syed Sattar

Safety

Toxicity – AHP® has been formulated to essentially be non-toxic and non-irritating with the lowest EPA (category IV) rating.

Environmental Impact

Hydrogen Peroxide is 100% biodegradable and breaks down into oxygen and water. AHP only contains ingredients that are considered environmentally preferable and sustainable. Further, AHP is certified by leading safety boards including UL (EcoLogo designation) and US EPA Design for the Environment (DfE).
AHP® is the world’s First & Only disinfectant technology formulated for:

- Hands
- Surfaces
- Devices
A Proven Track Record of Success

**AHP** receives registration in Canada as the **FIRST** hydrogen peroxide based hospital grade disinfectant and is awarded a general virucide claim for its effectiveness against non-enveloped viruses (such as Poliovirus and Norovirus).

**AHP** is recommended by the Ontario Ministry of Health as the **ONLY** surface disinfectant for use during the SARS crises in Canada.

**AHP** is the **FIRST** disinfectant technology to receive EcoLogo approval in Canada and registration as a sporidical surface disinfectant effective against *C. difficile* spores.

**AHP** becomes Canada’s **FIRST** 5 minute concentrated intermediate level hospital grade disinfectant with EcoLogo certification.

**AHP** becomes the **FIRST** EPA registered hydrogen peroxide disinfectant to receive DfE (Design for the Environment) approval.

**AHP** becomes the **FIRST** hydrogen peroxide based surface disinfectant to receive a Foot and Mouth Disease efficacy claim in North America.

**AHP** becomes the **FIRST** broad-spectrum disinfectant based on hydrogen peroxide to receive the Safer Choice/DfE Award.

**AHP** was both the **FIRST** EcoLogo registered disinfectant-cleaner in Canada and the **FIRST** DfE registered hydrogen peroxide disinfectant in the US.

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**A Proven Track Record of Success**

- 1998: **AHP** receives registration in Canada as the **FIRST** hydrogen peroxide based hospital grade disinfectant and is awarded a general virucide claim for its effectiveness against non-enveloped viruses (such as Poliovirus and Norovirus).
- 2001: **AHP** receives registration in Canada as the **FIRST** hydrogen peroxide based high level disinfectant and chemical sterilant with a 14 day re-use claim.
- 2003: **AHP** receives registration in the United States as the **FIRST** hospital grade surface disinfectant with a 1-minute contact time and a Category IV Safety Rating (the lowest EPA toxicity rating).
- 2006: **AHP** receives registration in the United States as the **FIRST** hospital grade surface disinfectant with a 1-minute contact time and a Category IV Safety Rating (the lowest EPA toxicity rating).
- 2007: **AHP** is the **FIRST** disinfectant technology to receive EcoLogo approval in Canada and registration as a sporidical surface disinfectant effective against *C. difficile* spores.
- 2008: **AHP** receives FDA registration as the **FIRST** hydrogen peroxide based high level disinfectant for flexible endoscopes not containing peracetic acid.
- 2011: **AHP** becomes Canada’s **FIRST** 5 minute concentrated intermediate level hospital grade disinfectant with EcoLogo certification.
- 2012: The world’s **FIRST** hydrogen peroxide based antimicrobial hand wash powered by **AHP** launches.
- 2014: **AHP** becomes the **FIRST** EPA registered hydrogen peroxide disinfectant to receive DfE (Design for the Environment) approval.
- 2016: **AHP** becomes the **FIRST** broad-spectrum disinfectant based on hydrogen peroxide to receive the Safer Choice/DfE Award.

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**Virox Technologies Inc.**
Awards and Associations

Proud To Be A Leader

Virox has long prided itself on developing and manufacturing cleaners and disinfectants that provide a safer and greener alternative to end users, occupants and the planet. Proof of this comes with multiple awards and recognition for sustainability, as well as several green certified products.

AWARDS

- **LEED® Silver Certification**
  From the U.S. Green Building Council (USGBC), becoming the first chemical manufacturer capable of not just developing EcoLogo/UL and Green Seal Certified products, but also manufacturing them in a LEED-certified facility;

- **EcoLogo Certified**
  AHP® was the FIRST disinfectant technology to receive EcoLogo approval in Canada as a green certified disinfectant cleaner;

- **EPA Safer Choice Partner of the Year Award**
  For Innovation by the Safer Choice Design for the Environment;

- **Safer Detergents Stewardship Award (SDSI)**
  Champion Status (highest level) for AHP® in the EPA’s Design for the Environment SDSI Award;

- **Green Guard**
  AHP® validated by GREENGUARD an industry-independent, third-party testing program for low-emitting products and materials;
• Green Seal Certified
  AHP® is certified by Green Seal — provider of science-based environmental certification standards that are fair, unbiased, and credible;

• Canadian/American Business Council Award
  In recognition for developing and distributing a safe and environmentally friendly hydrogen peroxide-based disinfectant;

• National Hog Farmer Award
  Virox Animal Health™ receives National Hog Farmer Award for “Most Promising New Product”

• BSI Registered
  Virox operates an Environmental Management System which complies with ISO requirements (ISO-19001/14001);

• Ontario Business Achievement Award
  Virox Awarded 2013 Ontario Business Achievement Award as a Global Innovator

STRATEGIC PARTNERSHIPS

• Fear Free℠ Partner
  Proud partner with Dr. Marty Becker, developer of the Fear Free℠ initiative designed to reduce fear, anxiety and stress in animals before and during a veterinary visit;

• AAHA Emerald Member
  Strategic Alliance Partner and Emerald Member of the American Animal Hospital Association;

• NAVTA
  The National Association of Veterinary Technicians providing input on national issues involving the veterinary profession;

• AASV
  Member of the American Association of Swine Veterinarians;

• CVMA
  Exclusive sponsor of the Canadian Veterinary Medical Association’s Emerging Leaders Program (ELP);

• APIC
  Member of the Association for Professionals in Infection Control and Epidemiology (APIC) — the leading professional association for infection preventionists (IPs);

• IPAC
  Member of Infection Prevention and Control Canada (IPAC) — developing, implementing, and evaluating strategies and programs to prevent and control infectious diseases
Disinfecting Across Multiple Markets

In-House Brands

Virox Technologies has introduced the benefits of AHP® to a number of markets with targeted formulations and brands. As we entered the various market rivalries these products provided a viable and intentionally Deliberately Different™ alternative to harsh legacy disinfectants accounting for their rapid uptake and growth.
Companion Animal

Subcategory Markets:
Veterinary Clinics
Animal Shelters
Kennels
Pet Groomers
Doggy Daycares
Farm Animal

Subcategory Markets:
- Livestock
- Poultry
- Equine

Professional Beauty

Subcategory Markets:
- Nail Salons
- Spa Facilities
- Hair Salons
- Tatoo Parlours
Medical Device Reprocessing

Alternate Healthcare

Subcategory Markets:
- Respiratory and Sleep Clinics

Subcategory Markets:
- Foot Care Nursing
- Homeo & Naturopathic Clinics
- Ophthalmology Clinics
- Massage & Acupuncture Clinics
Life Science Laboratory

Mold Remediation

Subcategory Markets:
Laboratories
Research Facilities

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And...Even More Markets

**Private Label Strategic Partners**

**The company we keep.** Virox Technologies continues to support its global partners in key markets. Being the world’s only disinfectant technology for hands, surfaces and devices is a testament to AHP’s diversity and strength and to the credibility of our disinfectant technology.
In 2003 — Accelerated Hydrogen Peroxide® was the **Only** surface disinfectant technology recommended for use by the Ontario Ministry of Health during the **SARS Outbreak** in Toronto Canada.

And now... it is the **First** Accelerated Hydrogen Peroxide® based surface disinfectant to be used in... **Space**

2017 — Our AHP® disinfectant brand PreEmpt™ was approved for use on the International Space Station.
Pushing Onward & Upward

Constantly Evolving

Through its Open Innovation philosophy, Virox Technologies has developed research and development capabilities to optimize ongoing innovation of its technology to address commercial opportunities in the $20+ billion global market for cleaning and disinfection products.
There are over 8000 disinfectant products in North America and that number is quickly increasing, making it more difficult to select the right product, match it with the right protocol and conduct the right training to prevent the spread of infectious disease.
Getting Our Message Out There

Virox Technologies in the Public Eye

In addition to their technical expertise and management capabilities the company’s priorities are to:

- Expand the application of existing products and technology into new end-user markets
- Maintain a business platform that is built on credibility, third party validation, endorsement of professional and academic communities, and peer-reviewed documentation
- Ensure the scientific community supports and endorses AHP® technology
- Continue an education platform through blogs, websites and engaged social media
Experts in Manufacturing Hydrogen Peroxide Based Products

Virox is a full service manufacturer focused exclusively on Hydrogen Peroxide-based products.

In our 60,000 sq. ft. facility the Virox Manufacturing Group is responsible for implementation and monitoring of quality manufacturing and environmental systems. Quality begins with scrupulous vendor selection, testing of incoming raw materials, ongoing employee training programs, constantly improving plant procedures and testing of finished products.

In addition to ISO 19001 and 14001 standards, Virox Technologies Inc is a Health Canada, US EPA as well as US FDA licensed establishment which operates as per GMP (Good Manufacturing Practices) Guidelines from HPFBI (Health Products & Food Branch Inspectorate) and quality system regulations (21CFR820).
Virox Technologies Inc. is committed to innovating, developing, and improving peroxide based, sustainable cleaners and disinfectants to improve the health of people and animals all the while reducing their environmental impact. This is why One Health™ is at the core of all our initiatives.
The science is here
and the time is NOW.

Engineering Revolutionary Disinfectants
for the War Against Microbes