

SOLUTIONS



Volume 1, Issue 1

June 15 2002

New Medical Line Launched

On June 1 2002 Virox Technologies will introduce it's new addition to the Accelerated Hydrogen Peroxide family of products .

Accel is a line of products focused to provide new solutions to the

medical market. As part of the first suite of products for the Accel line there are surface disinfectants, pre-moistened wipes, a 14 day reuse Chemosterilant and high level disinfectant, and two enzymatic alternative instrument cleaners. Accel solutions have substantial credentials, it is Health Canada registered



and manufactured in a ISO9002 facility. All studies and claims are based upon reputable third party sources such as CREM University of Ottawa, Dell Tech Labs, Nurco Technics,

ESG, Fine Labs, Canadian Ortech and Microbiotest. There are several peer review papers including pub-

lications in the *Canadian Journal of Infection Control* (Dr. S Sattar et al), and the *American Journal of*

Infection Control (Dr. M Alfa et al).

What this means to the end user is that they can make their decision with confidence and know that the claims represented are valid.



Accel KDS referenced in New CDC Guideline Draft

Virox Technologies new Accel KDS solution was identified in the new draft of Atlanta's CDC infection control guidelines as an alternative to enzymatic cleaners. KDS is a revolutionary new product that looks to address the ongoing concerns of ensuring employee health and safety and ensuring successful terminal disinfecting for medical instruments and devices. KDS is "A new nonenzyme, hydrogen peroxide-based formulation was as effective as enzymatic detergents in removing protein, blood, carbohydrate, and endotoxin from surface test carriers. In addition, this product was able to effect a 5-log10 reduction in microbial loads with a 3-minute exposure at room temperature" (page 33 of the **Draft Guideline for Disinfection and Sterilization in Healthcare Facilities—CDC.**) We are encouraged by the recognition by the CDC and other guideline issuing bodies about our technologies.

Inside this issue:

Patents Issued	2
Anthrax Spore Killed	2
Cleaning Catheter hubs	2
General Virucide Claim	3
ELSB Superbug?	3
Virox Scholarship Pro-	4

Special points of interest:

- Virox and CHICA introduce the Virox Patron Member Annual Conference scholarship program
- Accelerated Hydrogen Peroxide is patented world wide
- Virox introduces the new Accel medical line

AHP Receives Worldwide Patents

Virox Technologies Inc. has received patents in Canada the USA and internationally for Accelerated Hydrogen Peroxide™ (AHP), the innovative disinfectant formulation developed by the company.

AHP™, which first appeared on the Canadian market just over two years ago, has many benefits, including being free from volatile organic compounds (VOC'S), and it's non-toxic and non-corrosive at use dilutions.

Randy Pilon, President and CEO said, "This is a monumental step in solidifying our intellectual property platform. With patents pending in Japan, Australia, Brazil, Accelerated Hydrogen Peroxide™ will be well positioned and protected". Pilon went on to say, "In a crowded field with an overabundance of prior art, it is a testimony to the novelty and uniqueness of Accelerated Hydrogen Peroxide™ as evidenced through the issuance of patent protection". Hydrogen Peroxide is one of the world's oldest known germicidal substances but never has been widely used in disinfect-



ing because of its slow activity and inability to remain stable in highly complex formulations. Three years ago, Virox Technologies invented the formulas to stabilize and accelerated hydrogen peroxide. Accelerated Hydrogen Peroxide™ has possible applications in a diverse number of markets that include animal health, aquaculture, healthcare, medical device reprocessing, food processing, long-term care and hospitality among others. Virox Technologies Inc. is Canada's leading manufacture and supplier of hydrogen peroxide based cleaners and disinfectants, and received approval in 1999 from Health Canada (TTP) and the Pest Control Products Act (PCP) to market a new gen-

eration of disinfectants.

Virox has supply agreements with tier one partners in many vertical markets including, Bayer Inc. for animal health, Scican for the dental marketplace, Johnson Wax Professional and it's subsidiary The Butcher company for the industrial and institutional markets, and Toei Buhin Co., Ltd. for the dental and medical segments in Japan.

Virox Technologies Inc. will continue to pursue partnerships with organizations that are leaders in their respective markets.

AHP Kills Anthrax Spore

With the most recent biohazard decontamination needs of government and industry Virox has been engaged with the US Postmaster General, various elected officials and offices and the EPA to gain approval of an Accelerated Hydrogen Peroxide Anthrax effective surface disinfectant. Data generated to date for a formulation of AHP, using the method E 2111-00 of the ASTM, has demonstrated sporicidal activity in a 15

min contact time. This rapid contact time, coupled with a superior material compatibility, health, safety and environmental profile makes for a much anticipated product introduction. This AHP formulation will allow high risk facilities the opportunity to utilize a preventative program against bioterrorism that is realistic and achievable.

Comparison of four compounds for disinfecting catheter hubs

By John, MA, Newman, A, Hussain, Z and Peters, GT Division of Microbiology and Infection Control, London Health Science Centre

Objective: Reducing the microbial contamination on catheter hubs is an important strategy to reduce the incidence of catheter associated bacteraemia, particularly in dialysis patients. Following a manufacturer's directive warning against use of alcohol containing compounds on their catheter hubs we decided to compare a number of alternate disinfectants with 2% chlorhexine (containing 4% alcohol) in use at our centre.

Design/Setting: ATCC strains of *Candida albicans*, *Staphylococcus epidermidis* and *Pseudomonas aeruginosa* were suspended in defibrinated horse blood and used as the testing inoculum. After inoculation of the surface of a catheter hub and drying between 5 and 10 minutes a sterile cotton swab, previously dipped in disinfectant was used to wipe the hub. Disinfectants included: 25 chlorhexidine glucon-

ate (Stanhexidine®2%), 1% free iodine (providone® solution), Accelerated Hydrogen Peroxide™ (Virox RTU5®), and 0.057% sodium hypochlorite (ExSept®). A cotton swab soaked in saline was used as a reference. The number of viable colonies was determined by wiping the surface with a Calgiswab® swab moistened in Calgon® Ringers solution. One run consisted of three negative controls, three positive controls, an input control and ten tests.

Results: The input control ranged from log₁₀ 5 to log₁₀ 6 organisms. The catheter hubs wiped with saline removed 91% of the *P.aeruginosa*, 99.5% of the *C.albicans* and 99.9% of the *S.epidermidis*. The 1% free iodine, Accelerated Hydrogen Peroxide™, and 2% chlorhexidine gluconate in water significantly reduced the bioburden

compared to the saline control (P< 0.008). The 0.057% sodium hypochlorite significantly reduced the numbers of *Paeruginosa* (P= 0.0025) but did not significantly reduce the numbers of *C.albicans* (P= 0.09) or *S.epidermidis* (P= 0.62).

Conclusions: Stanhexidine®2%, Providone® Solution, and Virox RTU5® were found to be significantly more effective as surface cleanser than saline. There was no significant difference between these cleansers. The Providone® soaked swab was the only disinfectant tested to completely remove the soiled inoculum. There was no significant difference between saline and the sodium hypochlorite solution, ExSept®.

*Presented at CHICA's national education conference held in St John's NFLD June 2002



The Significance of a General Virucide Claim

The pre market evaluation and screening of hard surface disinfectants provide for claims associated to the use of surrogate organisms. For example to be called an high level disinfectant you must demonstrate a 6 Log reduction against *Mycobacterium terrae* as well as demonstrating through extended contact times you are effective against *Bacillus subtilis* and *Clostridium sporogenes* spores. The principle is that *Mycobacterium terrae* is a "gold standard" for determining broad based germicidal performance for use on those items that are classified as semi critical medical devices. A General Virucide claim employs the same principle.



Polio is the representative organism for all viral pathogens. Given its resistance to germicides it is the "gold standard" for all viruses much in the same way *Mycobacterium Terre* is the surrogate for high-level disinfectants. The guidelines for the determination of germicidal claims are published by Health Canada. This document identifies the require-

is required that you test and demonstrate performance against specific pathogens. So if the disinfectant can't kill Polio you need to test each virus you wish to make a claim against. "If efficacy against Polio I has not been demonstrated, efficacy against specific viruses must be demonstrated and these viruses named on the label." Therapeutic Products Programme Guidelines **Disinfectant Drugs 1999** Accelerated Hydrogen Peroxide™ not only kills Polio in 5 Min it does so to almost 2 Logs beyond the testing requirement making it an excellent disinfectant for dealing with blood borne pathogens.

"If efficacy against Polio I has not been demonstrated, efficacy against specific viruses must be demonstrated "

ments for testing for registration purposes. If you do not demonstrate performance against the Poliovirus then it

ESLB The Next Superbug?

On July 25 you can find out. JohnsonDiversey, Virox Technologies, Maunco, and The Centre for Research in Environmental Microbiology are



please to present the next session in the **Art of Infection Control Teleclass Series**. July 25's guest speaker is Dr. Elizabeth Bryce, MD of Vancouver Health Science

Centre, Vancouver B.C. Extended Spectrum Beta Lactamase bacteria are gram-negative bacteria that have learned to resist penicillins and many extended-spectrum cephalosporins. Could they be the next Superbug that plagues our hospitals and long term care facilities? Unlike MRSA or VRE, very little is known about the transmission of ESBL's and the implications for infection control professionals. This teleclass will identify what ESBL's are, how they are detected, mortality and morbidity, and infection control implications. Dr. Elizabeth Bryce is dually qualified in internal medicine and medical microbiology. She has practiced for 11 years as the Medical Director of the infection Control Department at Vancouver Hospital and Health Sciences Centre. She is also a Clinical Associate Professor at the Uni-

versity of British Columbia. Dr. Bryce has served as the Director of Standards and Guidelines for CHICA-Canada and is the Chair of the Working Group on Extended Spectrum Beta-Lactamases for the Canadian Nosocomial Infections Surveillance Project for the Canadian Epidemiology Committee. Dr. Bryce speaks from her research and from direct experience with ESBL. To register on line www.maunco.com Register by phone 1800-363-5376. Registration fee is \$35 per phone connection, long distance charges extra.

"very little is known about the transmission of ESBL's "



VIROX TECHNOLOGIES INC.

6705 Millcreek Drive
Unit 4
Mississauga, Ont
L5N 5M4

Phone: 905-813-0110
Fax: 905-813-0220
Email: info@virox.com

Mailing Address Line 1

Mailing Address Line 2

Mailing Address Line 3

Mailing Address Line 4

www.viroxtech.com

CHICA and Virox Introduce New Scholarship for national Education Conference

Infection control professionals (ICP) are faced with the growing challenges of preventing, tracking, and treating infections in our health care system. Virox believes education is the cornerstone to furthering the infection control profession. With current budgetary restrictions facing ICP's Virox has taken the initiative to make education more accessible to the profession. On June 2 CHICA Canada and Virox announced the Virox Patron Member Scholarship program. This program will provide funding for professionals to attend Community and Hospital Infection Control Association's (CHICA) national education conference. In it's first year



\$15,000 will be raised through Virox affiliated companies towards this cause. This means up to 8 persons will be eligible to attend next years conference in Thunder Bay. Details on the program will be available soon look for them on our web site www.viroxtech.com or CHICA's site www.chica.org

CHICA - Canada is a national, multi-disciplinary, voluntary association of Infection control professionals (ICPs) committed to improving the health of Canadians by promoting excellence in the practice of infection prevention and control. **Infection control professionals** come from many different backgrounds within the health care field. These include disciplines such as nursing, medicine, microbiology, medical technology and epide-



miology. Certification in Infection Control (CIC) is also available by passing an examination set by the Certification Board of Infection Control. CHICA-Canada endorses this certification. The Canadian Council on Health Facilities Accreditation requires all accredited hospitals to have systems in place to ensure provision of infection control activities. Within hospital and other health care facilities, Infection Control Professionals are responsible for keeping abreast of all current infection control standards and practices. They must ensure that these practices are implemented and the standards maintained within their institutions. This is done by orientation and continuing education of health care workers, consultation, surveillance and coordination of results. Infection Control Professionals maintain a strong liaison with public health authorities. (CHICA website)