

#### Where Sustainability Meets Performance







Committed to developing safer, healthier and more environmentally sustainable alternatives for the cleaning industry.



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# What is Engineered Water?



- A term used for a natural, alternative cleaning, deodorizing and/or disinfecting solution
- Intended to replace synthetic chemicals in the cleaning process
- Engineered Water is generated by using tap water, electricity and an additive, to create a cleaning and deodorizing solution.

# Why Clean With Engineered Water?

### BENEFITS

The use of Aqueous Ozone Solution does not introduce harmful substances into our world.



 NO toxic residues left on surfaces

- NO air pollutants emitted
- NO adverse health effects
   NO P.P.E. required
- Reduced packaging waste

CleanCore<sup>™</sup> products are designed to provide a safer, healthier and more environmentally sustainable cleaning solution.

# Who is CleanCore Technologies?



- A green-cleaning technology company, headquartered in Omaha, Nebraska since 2010
- Developed a patented technology that generates a sustainable, natural cleaning solution called pure Aqueous Ozone

#### **Key Sectors Served:**

- Health Care
- •
- Schools & Universities
- Corrections

- Animal Care
- Airports Government Agencies
  - Manufacturing •

# What is Aqueous Ozone?

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Our patented technology takes cold tap water and infuses it with ozone gas to create an aqueous solution that is a highly effective cleaner and exceptional deodorizer.

The solution's stability and effectiveness can be attributed to our patented technology that solubilizes ozone in the form of Nanobubbles.

#### **KEY BENEFITS INCLUDE...**

- On-Site Generation! No storage, no mixing, no transporting
- A more effective sanitizing application
- Converts back to air and water
- Provides for a safer, healthier, and more sustainable path to clean!







**STEP1** 



**STEP 2** 

O<sup>3</sup>

ONTAMINANT







https://iremne.org/Industry\_Partners



#### MULTI-PURPOSE HARD SURFACE CLEANER



ATP Before Cleaning

ATP After Cleaning

#### QUAT-BASED DISINFECTANT CLEANER



ATP Before Cleaning



ATP After Cleaning

ATP Before Cleaning AQUEOUS OZONE



ATP After Cleaning

# Competitive Landscape



# Competitive Landscape 🎸

NAME	TECHNOLOGY	GREEN SEAL CERTIFICATION	EPA REGISTERED DISINFECTANT	WATER PRE-TREATMENT OR MINERAL ADDITIVE?	COMMENTS:
CLEAN	PURE &	YES	NO	NO	<ul> <li>Nano-Bubble technology ensures usable life without the need for stabilizers or additives</li> <li>Use CleanCore on all water-safe surfaces</li> <li>Converts back to water and oxygen after use</li> <li>Requires no PPE</li> </ul>
ECOLAB HYDRIS	Split Stream	NO	YES	YES SALT/MINERAL ADDITIVE	<ul> <li>Large soda machine sized unit</li> <li>Filtered Tap Water is recommended</li> <li>Use creates an acidic by-product that requires special handling and disposal</li> </ul>
	Blended Stream	NO	YES	YES SALT/MINERAL ADDITIVE	<ul> <li>Some products require PPE and are classified as skin, eye, and respiratory irritants</li> <li>System can be seen as complex and difficult to learn</li> </ul>
iersano <sup>®</sup>	Stabilized Aqueous Ozone	YES	NO	YES	<ul> <li>Stabilizer unit creates an acidic solution below 3pH</li> <li>Frequent replacement of Stabilizer increases cost</li> </ul>
	Split Stream	YES	YES	YES SALT/MINERAL ADDITIVE	<ul> <li>Recommends softened tap water for use.</li> <li>Large soda machine sized unit</li> </ul>
PathoSans"	Electrochemical Activation	YES	YES	YES SALT/MINERAL ADDITIVE	<ul> <li>Equipment requires frequent maintenance</li> <li>Acidic sanitizing solution is the same color as the alkaline general purpose solution, creating possibility of confusion for user</li> </ul>

### Vancouver Coastal Health Commissioned Case Study



During the one year study, key findings included...

- Use of conventional cleaners was reduced by 76%
- Use of chemicals of concern (Canada) was reduced by 70%
- Water use was reduced by 90%
- Amount of plastic and cardboard brought into test facilities was reduced by 83% and 72%, respectively
- And cleaning and sanitation performance improved, all while dramatically reducing safety and health risks associated with conventional chemicals

Safer Chemicals Best Practice Case Study #3



GreenCare Community

#### Aqueous Ozone Cleaning System Assessment at Vancouver Coastal Health

#### Project Objectives

Part of British Columbia's GreenCare Sustainability Strategic Framework focuses on delivering patient care with zero toxicity with a goal to minimize woste generated and toxic chemicals used by the health care system and supporting operations. It was with this guiding principle in mind that Vancouver Coastal Health (VCH) and its supporting partners set out to explore aqueous ozone (AO) as a safe and more environmentally-sustainable alternative to chemical cleaners currently in use at VCH and Providence Health Care's (PIC) hospitals, health centres and residential homes.

With project leadership provided by Lower Mainland Facilities Management and Lower Mainland Business initiatives Support Services, and together with their support services provider Corthall Healthcare, the team set about to first conduct a *Chemical Toxicity Baseline Study* with BC-based Prism Engineering. Step two included exploring AO as a safer alternative. Crothall Healthcare had been using AO for floor cleaning\* in another BC hospital and were confident the pilot would have positive results.

#### Aqueous Ozone

AO employs a technology that influes oxygen and electricity into ordinary tap water, creating a solution that can be used to sanitize hospital surfaces. VCH's infection Control Department had approved the solution for all general purpose cleaning, which is over 27,000 litres or 75% of the annual chemical cleaner use. These cleaners discharge over 2,500 kg of themicals of concern into the environment, or 70% of the total annual chemical discharge. A switch to the AO solution would replace a large proportion of existing chemical cleaners use in health care sites across BCS lower mainland.

#### Current Cleaning Methodology

Cleaning products are currently dispensed by housekeepers using an automated dilution system. Wearing safety gloves, staff dispense water and chemicals into cleaning buckets, floor cleaning machines and small cartmounted pails. Microfibre<sup>®</sup> cloths and mops are placed into the bucket to



absorb cleaner. The cleaning solution is then applied directly to surfaces such as floors, furniture, switch plates, mirrors, glass and counter tops. Once the first wipe has picked up dirt and other fibres, a second wipe is performed to disinfect factoring in a recommended tenminute drying time.

The Canadian Coalition for Green Health Care is Canada's premier green health care resource network; a nationa voice driving the evolution of green in Canada's health services sector.

www.greenhealthcare.ca

### **CleanCore Nation!**













# Engineered Water... Friend or Foe? **(**

Reasons for growth of the category? User Benefits User Disadvantages Is engineered water here to stay? How can your university begin trialing **CleanCore Equipment?** Go...Ready Set



### **Questions?**





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Thank You!



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