### Introduction

- Selective Micro Technologies (SMT) manufactures and distributes ultra-high purity chlorine dioxide (ClO<sub>2</sub>)
- ClO<sub>2</sub> is a highly effective biocide at very low concentrations with low toxicity
- SMT products are widely used in acute care settings, for hard surface disinfection, pharmaceutical manufacturing, food processing and other industries where effectiveness and purity matter.
- SMT products are registered with the EPA, Health Canada the FDA and is certified by the Organic

Materials Review Institute (OMRI) and NSF

### **Chlorine Dioxide**

Selectrocide® is a chemical oxidant, and exists as a yellow/green gas which is highly soluble in water. It is similar to Chlorine in name only. Chemically, chlorine has two electron receivers; chlorine dioxide has five, providing Selectrocide® with up to 2 ½ times more capacity for killing microorganisms than chlorine.

Selectrocide® works through oxidation. For this reason, microbes cannot develop resistant strains. Chlorine dioxide is highly effective anti-microbial against bacteria, viruses, fungi, sporeformers and even biofilm.





#### Selectrocide® Kills Coronavirus

Ultra Pure ClO<sub>2</sub> from Selective Micro Technologies

- 200 times more powerful than bleach, peroxide or ammonia
  - Yet won't burn skin or damage materials
- Kills 99.999% of coronavirus, bacteria viruses and spore-formers
- EPA registered as a broad spectrum, hospital grade disinfectant
- EPA registered and tested against corona virus
- Leaves no residue to irritate skin, eyes and nose
  - Safe to use around people
- Works in minutes





## New disinfectant for sustainability

- SMT products ships dry
  - Save money by not shipping liquid
- So easy to use
  - Just add water
  - Spray, mist or fog applications
- Long shelf life
  - Can store for up to 2 years before activation





# Comparison to "stabilized" CIO2

- Production of "stabilized" chlorine dioxide involves mixing an acid and a chlorite solution.
- They produce very little ClO2 in relation to other byproducts and residual reactants. This point is often lost because most people measure ClO2 using a method which permits the aggregation of all oxy-chloro species.
- The resulting solution is often highly acidic, which can cause compatibility problems with many common materials and contributes to handling difficulties.



## Comparison to other disinfectants

Ultra-pure chlorine dioxide from Selective Micro has many advantages over other disinfectants:

- Very low toxicity profile
- Extremely effective against all microbial threats
- Non-corrosive, compatibility with the widest range of materials
- Highly effective at very low concentrations
- Safe approved for use directly on food
- EPA registered
- FDA registered
- Organic registered Organic Materials Review Institute (OMRI)





# How is it applied?

Ultra-pure chlorine dioxide from Selective Micro is easy to use – Just Add Water!

Almost all uses for Selective Micro products involve spraying or washing the target product or surface.

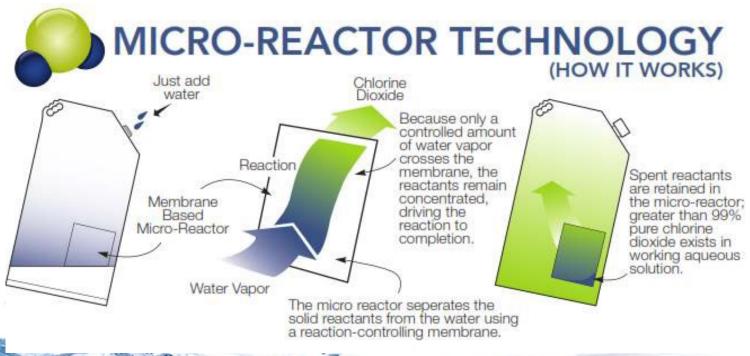
Gas-phase applications are in the works which will greatly expand the applications for pure chlorine dioxide.





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### Use Applications for EPA products

SMT's EPA-approved products may be used in the following applications:

- As a disinfectant on hard, non-porous surfaces at 100 ppm
- As a sanitizer on hard, non-porous surfaces at 20 ppm
- As a food contact surface sanitizer on food contact surfaces at 5 ppm
- Selectrocide is nonreactive with electronics and interactional computer equipment.
- Selectrocide can be used to clean/disinfect bathrooms, shower rooms, locker rooms, spas, and laundry rooms
- Selectrocide can be used in kitchens and on food contact surfaces, including foods

To see all approved applications, please refer to products' technical bulletins.





## Use Applications for FDA products

SMT's FDA registered products may be used in the following applications:

- Food Contact Notification (FCN 645)
  - Poultry processing
  - Non RAC fruits and vegetables
- FCN 1578
  - Red meat including organs and parts
  - Seafood
- FCN 1764
  - Fumigation of fruits and vegetables including RAC's
- FCN 1804
  - Fruits and vegetables considered RAC



