

# CORROSION

**DID YOU KNOW:** Not all Chlorine Dioxide Disinfectants are equally corrosive.

Corrosion by disinfectants is caused by 2 mechanisms:



**CORROSION BY THE LIQUID DISINFECTANT ITSELF**

**CORROSION BY RESIDUAL DISINFECTANT LEFT ON THE SURFACE**



The most corrosive liquid disinfectants are those that contain **liquid chlorine** (i.e., hypochlorite anion) and those that have **strongly acidic pH**.

The worst being acidified bleach-type disinfectants.

Older "chlorine dioxide" technologies based on acidified sodium chlorite are nearly as corrosive due to the combination of a strongly **acidic pH** and a high level of **unconverted chlorite salts** in the solution.

Not to mention dried surface residue left behind after disinfection.

This can be:



Remnants of the disinfectant



Precursors such as unreacted sodium chlorite



Inert salts in the solution such as sodium chloride

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# WHAT'S THE IDEAL DISINFECTANT?

The ideal disinfectant from a corrosion perspective is pure chlorine dioxide at near neutral pH.

pH:7



Chlorine dioxide, because it is a dissolved gas, does not leave any surface residue



Vimoba and MB-10 Tablets are the only chlorine dioxide technologies on the market that come close to these characteristics. Within the pores of Vimoba Tablets...



Conversion of the sodium chlorite precursor salt is substantially completed (about 95% conversion).

Because of this, there is little or no unreacted sodium chlorite salt left in the solution after the tablet dissolves.



Typically  
**4-6 pH**

Since all the chemistry happens within the tablet pores, the solution is only slightly acidic after the tablet dissolves.

The older acidified sodium chlorite solution technologies achieve only about 10-30% conversion of chlorite anion to chlorine dioxide, require a very acidic pH (around 2) and result in a much more corrosive solution and a higher amount of corrosive residue (in the form of unconverted sodium chlorite salt).

You can learn more about Vimoba Tablets at <http://quiplabs.com/product/vimoba-tablets/>

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