

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



MB-10 Tablets are the only chlorine dioxide technology on the market that comes close to these characteristics. Within the pores of MB-10 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 MB-10 Tablets at www.quiplabs.com/product/mb-10-tablets

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