



Formulated with

**Zetrisil** 

A PROPRIETARY SILICONE QUATERNARY SOLUTION

## ZETA POTENTIAL

### What is Zeta Potential?

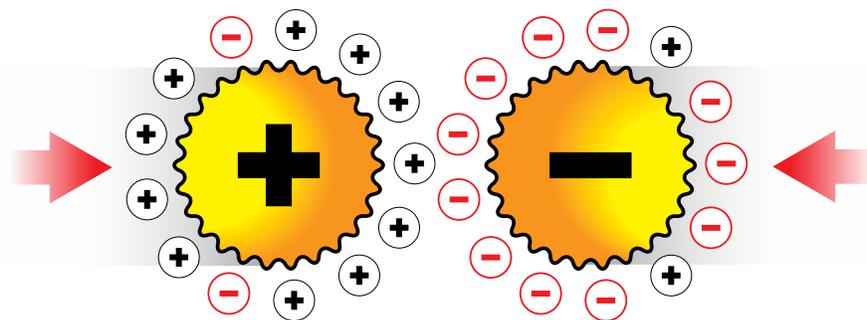
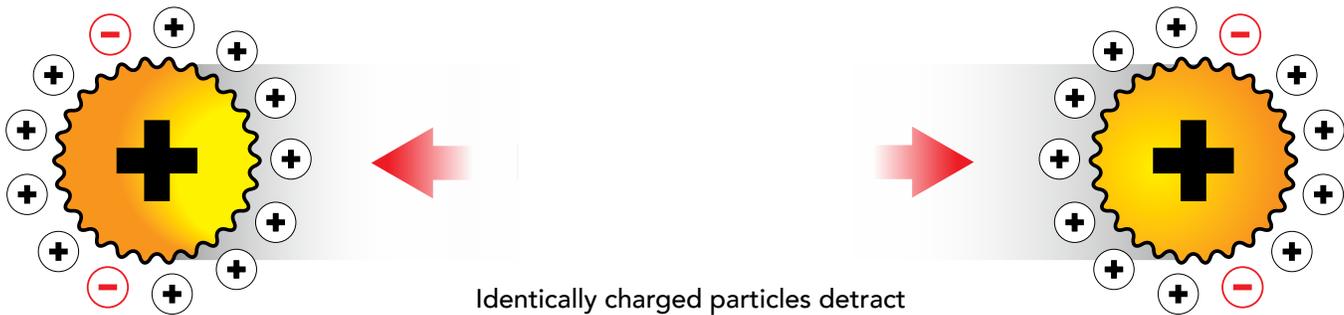
Zeta Potential is the analysis technique for determining the surface charge of nanoparticles in a solution (colloids). Nanoparticles have a surface charge measured in millivolts that attracts a thin layer of ions of opposite charge to the nanoparticle surface.

### Why is Zeta Potential important for Disinfectants & Sanitizer?

The greater the positive charge disinfectants or sanitizing solutions have, the greater killing effect against negatively charged bacteria and virus, by way of opposite pole magnetic attraction.

### How does Zeta Potential improve the efficacy of Disinfectants & Sanitizers?

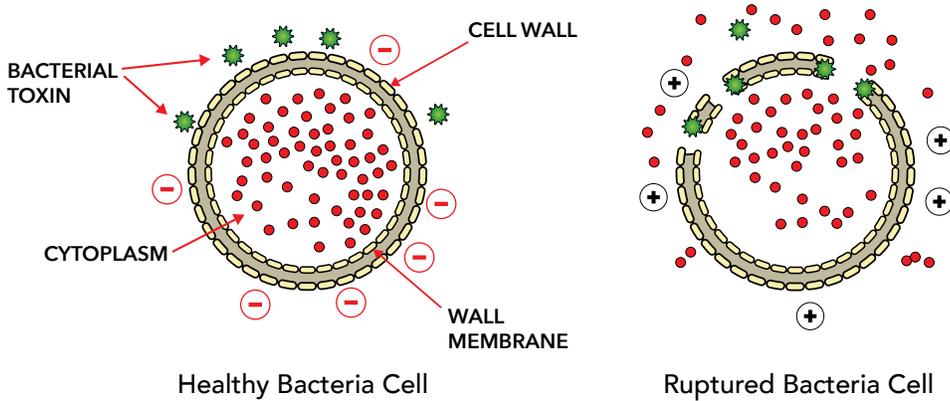
The majority of bacteria and virus are negatively charged nano particles. With a positively charged disinfectant & or sanitizer they will be attracted to each other and agglomerate the negatively charged bacteria or virus particles around the positively charged disinfectant or sanitizer solution therefore improving the kill time and efficacy rate per volume of liquid, disinfectant or sanitizer.



Negatively Charged Bacteria & Virus Nano Particles are Attracted to Positively Charged Disinfectant or Sanitizer Nano Particles

## Can Zeta potential kill bacteria and virus's magnetically?

Yes. By way of changing the magnetic charge around the bacteria or virus cell, it can damage the cell wall membrane causing osmosis imbalance to the bacteria or virus, causing the cell wall to rupture, lyse and explode.



A change in the bacteria's outer cell wall polarity by way of change in magnetic charge from negative to positive has caused the healthy cell wall to rupture or lyse - thus killing the bacteria.

## Zeta Potential Assessment

An aliquot of 10 mL was taken from each sample and placed in the zeta check cylinder. Each measurement was completed in 30 seconds. Analysis was performed in duplicate. Results are summarized in Table 1. It was found that both the samples showed incipient stability.

TABLE 1: ZETA POTENTIAL RESULTS SUMMARY			
Sample	Replicate	Zeta Potential (mV)	Stability Behavior
My-Shield® Surface Sanitizer Lot 01102019-SS-A	1	9.3	Coagulation Incipient instability
	2	9.3	
	Average	9.3	
My-Shield® Hospital Grade Disinfectant Lot 01102019-HG-A	1	19.2	Coagulation Incipient instability
	2	19.2	
	Average	19.2	

Testing conducted by Jordi Labs Mansfield, MA USA | Project #J14640

