# UNDERSTANDING ORP

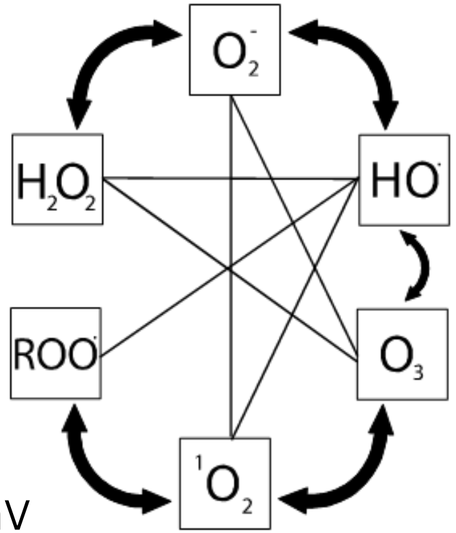
This table is the universally accepted ORP contact time, established 1967.

| Pathogen | < 450mV | 550 - 620mV | > 650mV |
|---|---|---|---|
| ***E Coli*** | **> 300 s** | **< 60 s** | **< 10 s** |
| ***Salmonella spp*** | **> 300 s** | **> 300 s** | **< 20 s** |
| ***L. monocytogenes*** | **> 300 s** | **> 300 s** | **< 20 s** |
| ***Coliform*** | **> 48 hr** | **> 48 hr** | **< 30 s** |

## ORP = Oxidation Reduction Potential

ORP is a scientific measurement, expressed in **millivolts (mV)**, that indicates how effective water is at **breaking down contaminants** and **killing harmful microorganisms**. The higher the ORP, the **greater the water's ability to oxidize (break down)** organic material—including **bacteria, viruses, and parasites**.

***wtr.'s*** *proprietary method is to increase the variety and concentration of oxygen radicals that do not produce toxic disinfection-by-products.*




## Why Does ORP Matter in Water Treatment?

Water with a high ORP value (typically +600 mV and above), indicates a strong presence of oxidizing agents **and/or wtr.'s proprietary method**, which disrupts the cell walls of bacteria and pathogens, leading to faster inactivation and death.

QUICK TIPS

- ORP is measured using electronic sensors
- A positive ORP means water can oxidize contaminants
- The ideal ORP for drinking water disinfection is between +550 mV and +700 mV