

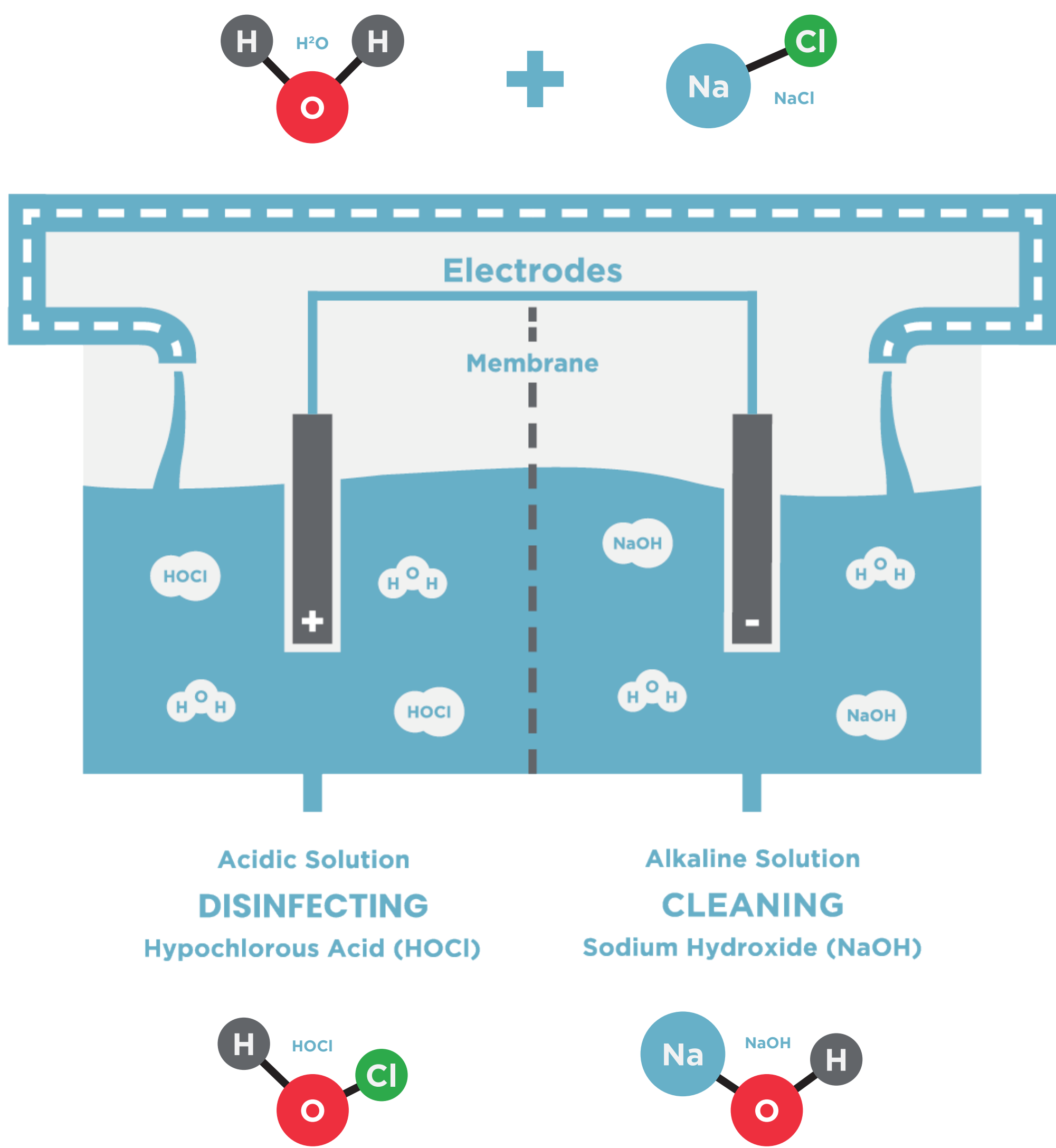
The Science of Electrolyzed Water



Electrolyzed water is the process of using electricity to change the chemical structure of dissolved salt (sodium chloride) and water to produce powerful and non-toxic disinfecting and cleaning/degreasing solutions.

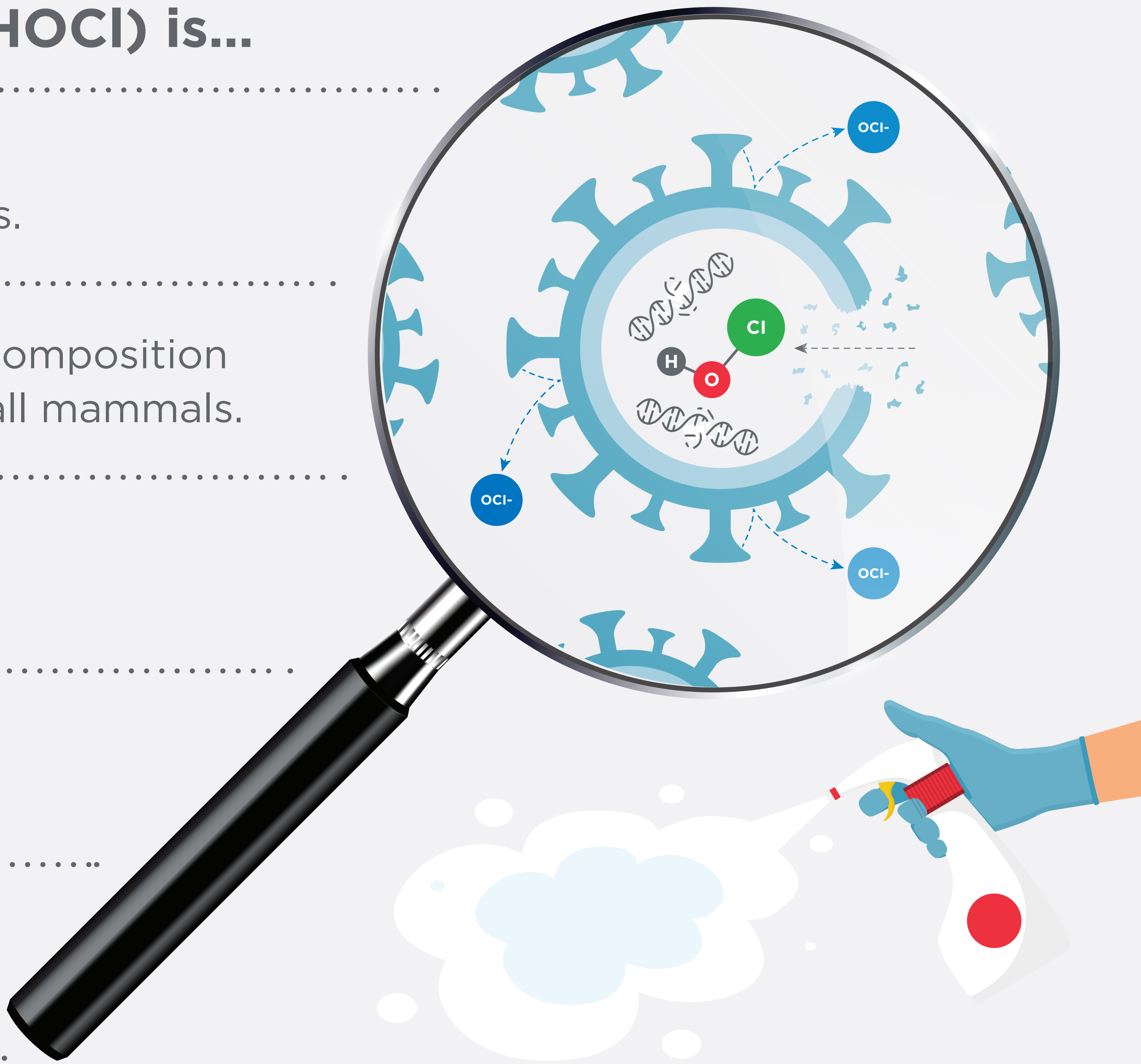
How it Works

1. A mixture of water (**H²O**) and salt (**NaCl**) is electrically charged
2. The salt ions Na and Cl are separated:
 - Negative ions Cl⁻ and OH⁻ are attracted to the anode and create hypochlorous acid (**HOCl**) disinfectant
 - Positive ions Na⁺ and H⁺ are attracted to the cathode to produce sodium hydroxide (**NaOH**), a multi-purpose cleaner and heavy duty degreaser
3. Fresh water is added to each solution to dispense ready-to-use cleaning and disinfecting products



Electrolyzed Water Disinfectant (HOCl) is...

- Made with natural ingredients—no allergens, fragrances or toxic chemicals.
- Safe for human tissues. It is the same composition as HOCl made by white blood cells in all mammals.
- Used in healthcare, food safety, water treatment, and general sanitation.
- A powerful oxidant that kills 99.9% of bacteria, fungi, and viruses.
- Highly effective and prevents bacterial resistance leading to superbugs.



Benefits of Using Electrolyzed Water for Cleaning & Disinfecting

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|---|---|
| No toxic material disposal requirements and is not considered by OSHA to be hazardous waste | Safe for food contact surfaces; no rinse required |
| Non-corrosive and residue-free; does not harm surfaces, metals, clothing or wood | Replaces toxic and cancer-causing chemicals |
| Non-toxic & non-flammable; does not require hazardous or chemical storage or handling precautions | On-site generated, ready-to-use solutions |
| Highly effective; does not allow antimicrobial resistance | Reduces costs and labor |
| No risk to worker health or safety (PPE not required) | All natural, eco-friendly |

Sources:

- <https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/electrolyzed-water>
- <https://www.food-safety.com/articles/4263-activated-and-electrolyzed-water-a-brief-review-of-a-new-generation-of-cleaners-and-sanitizing-agents>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8877615/>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8119747/>