

## **The New Biocide for Oil and Gas Operations**

Oil and gas frac operators are caught between two extremes. First, they MUST use biocides to kill bacteria. Failing to do so would result in very costly contamination and corrosion of the underground formation and their production equipment. Second, when using biocides, they must choose among a selection of hazardous chemicals known to threaten the environment and pose danger to employees.

Today, Neutral Anolyte is THE answer to the biocide dilemma since it is the ONLY biocide which can satisfy the quandary in which Oil and Gas companies find themselves. Neutral Anolyte is more effective and affordable than virtually any chemical biocide. More importantly, it is one-hundred percent green meaning that it ultimately breaks down mostly into water and a trace of salt.

Here is the question most often asked: "How is it possible that water subjected to electricity can be so potent against harmful microbes while being eco-friendly, non-toxic, and safe to humans?" The answer lies in the way electrolyzed water creates hypochlorous acid. Hypochlorous acid is one of the most potent biocides of all the chlorine species.

Through electrolysis, hypochlorous acid can be made at a neutral pH. It is neither too caustic nor too acidic. As such, it is perfectly safe to humans and animals. Because it breaks back down into water, it poses no threat to the environment, a fact that will thrill today's environmentalists.

Neutral Anolyte consists mostly of hypochlorous acid with a small percentage of hypochlorite. While this solution is deadly to pathogens, it is virtually harmless to humans. At the end of its shelf life, up to one year, it simply breaks down into its main constituents of water and a small amount of salt. As such, it poses little danger to soil or natural water resources.

Neutral Anolyte and its aqueous cousins are used around the world in both developed and third world countries. It is the biocide of choice in many industries including hospitals, food processing plants, veterinarian clinics, animal husbandry operations, and restaurants, to name a few. Wherever public pathogens are an issue, and/or wherever toxic chemical disinfectants are a concern for workers, it is not unusual to see Neutral Anolyte being used. In the USA it is much rarer to see companies using Neutral Anolyte as a biocide. This fact is probably due to the dominance of the chemical industry. However, you can expect to see Neutral Anolyte grow in use as a frac fluid biocide in the coming years.