

COVID - 19

Hypochlorous Acid

INTRO

Hypochlorous acid is lethal to every pathogen known to man but completely harmless to humans and other mammals.

It is a disinfectant that is 100 to 300 times more effective than bleach (NaClO example Milton) - yet is non-toxic and non-irritating! Bacteria cannot develop resistance to it - in fact, in scientific tests it has killed every pathogen (virus, bacteria, fungus, mold, etc) which it has been scientifically tested against.

Not only is hypochlorous acid an amazing disinfectant but it also speeds up the healing. Why this is so is not precisely known but it is likely to do with the "redox" reaction, a key process of this special solution. It is believed that increases Bioactivity by facilitating improved inter cellular communication.

Although "acid" - it actually isn't acidic at all because it only exists as a neutral pH solution! In order for this disinfectant to be most effective it has to be neutral pH like, water! (7pH).



This is a solution that is lethal to every pathogen harmful to humans yet remains non-toxic to mammals!

What Is HOCl?

Hypochlorous Acid is a strong oxidiser. It is so destructive to pathogens and fungi because of its very high "Redox Potential". Hypochlorous Acid robs electrons from bacteria thus destroying it.

With pathogens, HOCl reacts with and destroys the cell wall causing necrosis (rupturing of the cell) or apoptosis (programmed cell death). Anything left of the cell contents are then also destroyed by the HOCl. Even though a virus is not technically a living thing, it too is destroyed in the same way.

Despite the destructive potential to living things, HOCl is produced by our body and is used by our immune system. This process is called phagocytosis.

Whenever the immune system is compromised, the body detects the compromised location and sends white blood cells through the body to fight the invading pathogens. The white blood cells attack, surround (or eat), and destroy (digest) the pathogen using a process that creates solutions that involve Hypochlorous acid as an end product.

Even in weak solutions, HOCl is lethal to pathogens, but tolerable to mammalian cells.

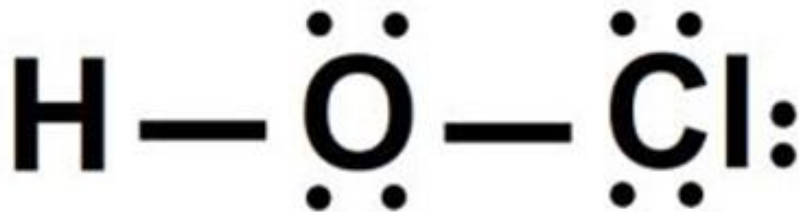
Outside of use on living things, it is used even more frequently in food processing plants because of its amazing ability to disinfect equipment for meat and dairy products without introducing any hazardous chemicals into the food.

COVID-19 (Coronavirus Disease 2019) Virus Structure and Mechanism of Infection

Coronavirus Disease 2019 (COVID-19) is a novel virus. It causes severe acute respiratory syndrome. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the agent responsible for a surface-to-surface communicable disease that had infected approximately 4.7 million persons as of May 17, 2020. Health care providers need options to limit and control the spread of the virus between themselves and patients.

COVID-19 is an enveloped, positive-sense, single-stranded RNA virus approximately 60 to 140 nm in diameter. The virus's Spike glycoprotein S1 firmly binds to the angiotensin converting enzyme 2 (ACE2) receptor, which allows entry into the host cell. COVID-19 infection creates a cytokine storm, severe pneumonia, multiple-organ failure, and acute cardiac injury.

Transmission occurs through touch or aerosol spreading of the virus. A common pathway of spreading this virus is through respiratory aerosols from an infected person. During speech, humans emit thousands of oral fluid droplets per second that can remain airborne for 8 to 14 minutes. COVID-19 is detectable for up to 3 hours in surface aerosols, for up to 4 hours on copper, for up to 24 hours on cardboard, and for up to 2 to 3 days on plastic and stainless steel. There is a need to disinfect surfaces potentially exposed to COVID-19 to prevent transmission.



Use of Disinfectants

On contact with the virus, a disinfectant agent changes the protective protein coat, which loses its structure and aggregates, forming clumps of proteins with other viruses. Currently, the US Environmental Protection Agency has recommended numerous disinfectants against COVID-19 including hypochlorous acid (HOCl). The mechanism of disinfection involves the destroying of the cell wall of microbes or viruses, allowing the disinfectant to destroy or inactivate them.

