

Chlorine - A Great Disinfectant

Learn the difference between tablets and liquid bleach

- Calcium hypochlorite tablets produce a FRESH hypochlorite solution when mixed with water as the tablets are being used within the treatment system. This solution can maintain free available chlorine or HOCl, the active disinfectant in a chlorine solution, for 4 hours.
- During the manufacturing process of liquid household bleach, a solution is created and begins degrading soon after it's manufactured. The bottle of liquid household bleach purchased from a retail store is NOT A FRESH hypochlorite solution. It is a solution with an unknown chlorine content.
- The main factors that contribute to the degradation of a sodium hypochlorite solution are light, temperature and age. After liquid household bleach is manufactured, it takes 4-6 weeks to arrive at retail stores for purchasing. This provides homeowners with only a limited time frame where the bleach is at the effectiveness level stated on its label.
- For a chlorine solution to be a good disinfectant, it must meet the chlorine demand. The chlorine demand is the amount of free available chlorine needed to disinfect or oxidize organic matter before a residual is reached. If the chlorine demand is not met, complete and proper disinfection can not be obtained.
- All (fresh and old) sodium hypochlorite solutions (liquid bleach), unless buffered by the injection of an acid, have a pH of 10.25+ producing no HOCl. These solutions produce only the OCl-ion, a very poor disinfectant which is 80 to 120 times less effective as a disinfectant than a solution containing HOCl.

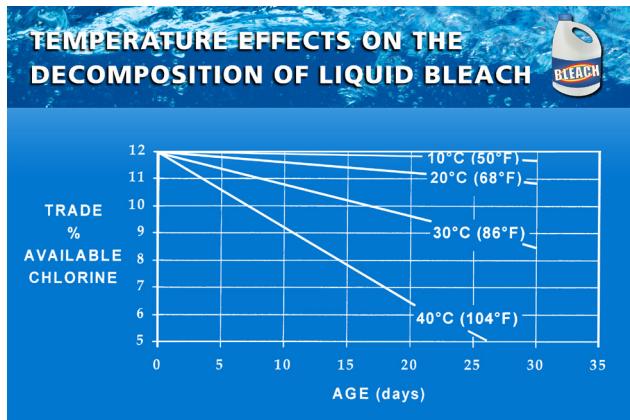
The liquid household bleach most commonly being purchased and recommended for aerobic treatment systems contains 5.25% to 6% chlorine. Based on the decomposition rate illustrated, the percentage of available chlorine will significantly degrade to levels below what is required to disinfect disease causing microorganisms.

Untreated wastewater exposes your family, pets and environment to harmful bacteria and diseases. Utilize Norweco calcium hypochlorite tablets to insure proper disinfection.

Contact us today at 1-800-NORWECO

REFERENCES

- George Clifford White, *Handbook of Chlorination and Alternative Disinfectants*. Third Edition, Van Nostrand Reinhold, New York, 1999.
George R. Dychdala, Chlorine and Chlorine Compounds. In: Block SS, ed. *Disinfection, Sterilization, and Preservation*, 5th ed. Philadelphia Lippincott Williams & Wilkins, 2001.
Article: Chlorine Bleach Shelf Life By Anne Marie Helmenstine, Ph.D. June 2019.
<https://www.clorox.com/our-purpose/our-causes/the-truth-about-bleach>



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