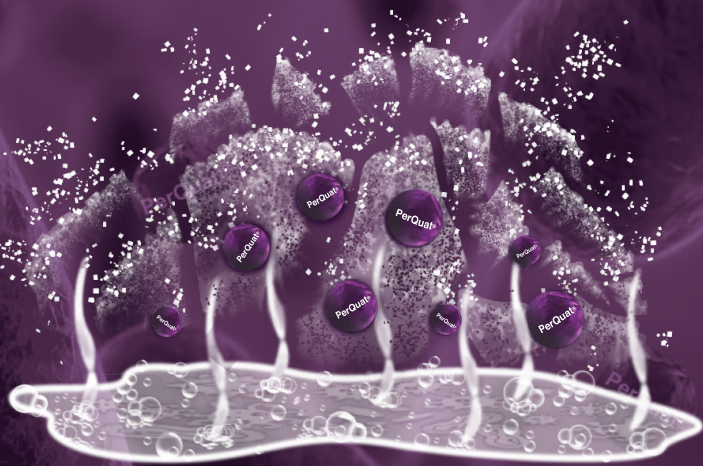


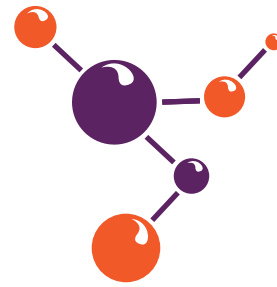
THE SCIENCE OF PERQUAT® TECHNOLOGY



Unlike free swimming (planktonic) microorganisms which live in water-based environments, biofilm microorganisms live in a protective film that is difficult for conventional disinfectants to penetrate. **PerQuat®** technology is based on the discovery that a powerful combination chemistry, including a hydrolytic agent, a phase transfer (PT) catalyst, and an oxidizing agent, creates products that have potent antimicrobial activity and the unique ability to breakdown and dislodge biofilm.

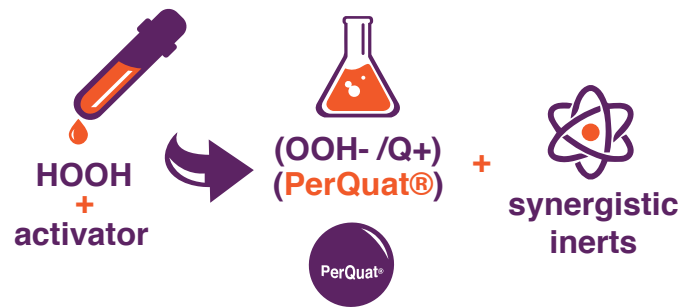


Sterilex **PerQuat®** products contain synergistic components that lyse open the biofilm structure, collapse the biofilm polymer matrix and physically lift the biofilm structure from a surface.



What is the scientific explanation for the superior performance of Sterilex® products?

In an alkaline environment, hydrogen peroxide transforms into the hydro-peroxide anion - a powerful negatively charged hydrolytic agent. **PerQuat®** technology introduces a positively charged phase transfer catalyst that “grabs” hydro-peroxide anions, transfers them into the biofilm, and enables them to lyse the biofilm and break down lipid-based soils. This does not occur with ordinary oxidizing cleaners, and is the reason for the superior activity of Sterilex® products and their unique ability to penetrate fully into biofilm.



The ability of Sterilex **PerQuat®** technology to collapse the protective biofilm matrix, penetrate into the biofilm to kill pathogenic organisms, dissolve the biofilm structure, and physically remove the structure from a surface is the basis of Sterilex chemistry.