

# Product Effectiveness/SOLUTIONS

**Choosing Solutions For Your CleanTech® System** – Meritech-provided or Meritech-approved solutions are recommended to assure CleanTech performance, reliability, and cost-effectiveness. Meritech provides the following U.S.D.A. E-2 and E-3 solutions specifically formulated for CleanTech Systems:

**E-2 Rated Cleaners and Sanitizers** – E-2 rated solutions are the most effective solutions available. These solutions are cleaning and sanitizing solutions, meaning they have detergents to remove biofilm as well as sanitizers to kill microorganisms on hands and gloved hands. CleanTech systems with these solutions are commonly used to replace both manual handwashing sinks and dip/gel sanitizing stations. E-2 rated solutions require a potable water rinse after washing, which CleanTech systems provide automatically. E-2 solutions available from Meritech are:

**CHG E-2 (Chlorhexidine Gluconate)** – Has the best combined properties of immediate and residual microorganism killing properties. The CHG actually binds to proteins on hands, resulting in its excellent residual killing properties. As hands are recontaminated, CHG has the best residual killing ability available to fight the contaminate with residual killing of over 6 hours.

**Quat E-2 (Quaternary Ammonium)** – With all the benefits of an E-2 cleaner and sanitizer, Quat E-2 is used for washing gloved hands where CHG does not have residual properties, or where the residual properties of CHG for washing hands is not required.

**E-3 Rated Solutions** – These solutions are sanitizers only, and do not have detergents to remove biofilm. These sanitizers are effective in killing surface microorganisms. In CleanTech systems, they are used in the endstage sanitize configuration where sanitizer is injected after the wash and rinse cycles. They are also used in applications where only a sanitizing cycle, not a wash and rinse, is desired. Quaternary Ammonium E-3 is available from Meritech for these applications.

**Self-Cleaning Solution (used in models 2000S and 4000S only)** – Used as either a hard surface or as a footbath disinfectant in the model 2000S and 4000S. The 2000S and 4000S have the ability to dispense two different solutions - handwash/sanitize solution, and Self-Clean. Self-Clean is normally dispensed every 24 hours to prevent microorganisms from colonizing in the system and facility drains. The systems can also be programmed to dispense Self-Clean more frequently to automatically keep footbaths clean and at the correct level of sanitizer at all times. It is recommended to spray or pour a hard surface disinfectant into all sink drains, floor drains and CleanTech models other than the 2000S and 4000S to keep microorganisms from colonizing.



**CHG E-2**



**QUAT E-2**



**QUAT E-3**



**Self-Cleaning**



**MERITECH**  
Handwashing Systems

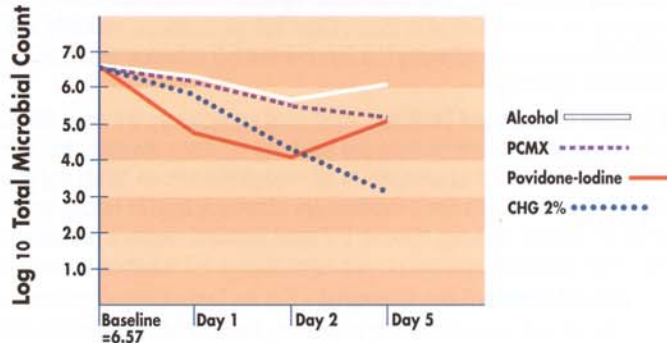
# CleanTech® System Effectiveness

## REMOVING TRANSIENT MICROORGANISMS FROM HANDS



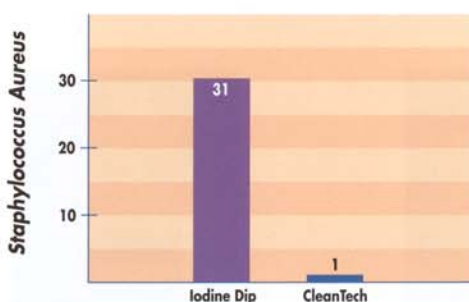
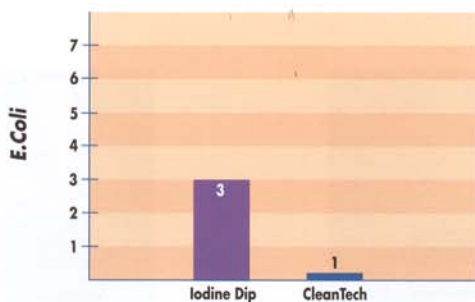
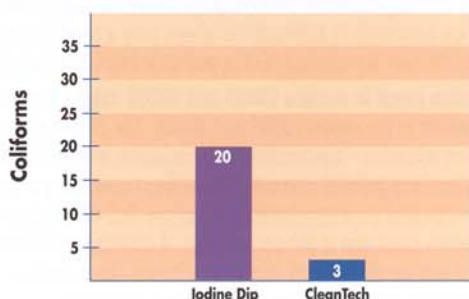
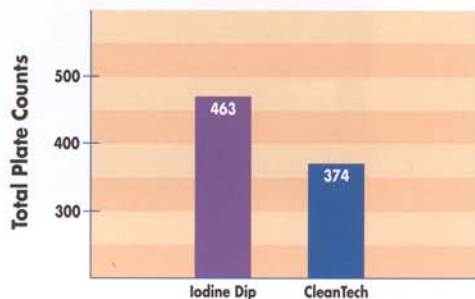
NOTE: 24 tests were performed with each solution, washing hands in the CleanTech System.

## CHLORHEXIDINE GLUCONATE'S (CHG) SUPERIOR RESIDUAL KILLING



NOTE: Each group washed two minutes with a brush impregnated with the same solution one time each day for five days. Samples were taken each day immediately after washing.

## Microorganism Counts On Gloved Hands Using Iodine Dip vs. CleanTech®



NOTE: Swab microorganism recovery method was used on the gloved hands. Samples were taken prior to employees leaving production for break every two hours. Employees were rotated into the different groups daily. Test results recorded were averaged for each method over a five day period.



**MERITECH**  
Handwashing Systems

8250 South Akron Street, Suite 201  
Englewood, CO 80112  
Phone 303-790-4670 Fax 303-790-4859  
800-932-7707 www.meritech.com