



New Cleaning Technology in the Dairy Plant

New cleaning technology for food and beverage plants including dairy plants, provides significant opportunities to save water, time, and energy while improving cleaning efficacy. Advances in the science of formulating cleaning products has allowed for these savings to impact the bottom line in every plant that utilizes this new technology.

1. The most significant feature of this new technology is "one -step" cleaning capability.
 - a. Traditional cleaning procedures require a two-step cleaning process utilizing an alkaline wash step and an acid wash step. The alkaline wash step removes fats, proteins, and carbohydrates and the acid wash step removes minerals.
 - b. This new cleaning technology provides products that perform the function of both an alkaline and an acid in a one-step cleaning process. This results in the very significant benefit of eliminating a wash step and post-wash rinse step which saves water, time, energy, and chemical.
2. In addition to these savings, the science behind the formulation of these products provides far better penetration of soils and equipment surfaces than traditional products which results in improved cleaning efficacy. Please note the graph at the end of this paper, portrays the penetration of different products on a stainless steel surface.
 - a. FYI, the new plastic micro perforation hoops in the cheese industry (a challenge to clean with traditional cleaning products) are successfully cleaned with these products.
3. Another key feature of this technology is that these cleaning products can be reused from day to day with minimal daily make-up while maintaining excellent cleaning efficacy. Again, resulting in saving water, time, energy, and chemical.
4. Another feature is that these products rinse free of wash solution faster than traditional products allowing for water and time savings as a result of less time spent rinsing.
5. Furthermore, a feature everyone likes, is that this new technology is called "green" in that it reduces environmental impact, has global sustainability, and has biodegradable products making the user a good steward of the environment.



6. Saving water, time, energy, and chemical has been mentioned often. It is important to note, saving time may be the most significant item in this group. Creating more time for an employee or for a production shift can have an enormous impact on productivity. For the employee it opens up opportunities to focus on and accomplish other tasks. For the production shift it may mean the addition of more production or more economic use of employee time. Employee time is very valuable. Whenever saving time is cited it is directly related to employees spending less time cleaning and more time doing other tasks.

The phrase, "New technology is new technology because of the science behind it.", really rings true, especially in this case, as its success has been proven in many plants, particularly dairy plants.

In order to better understand the savings associated with the use of "one-step" cleaning products it would be best to highlight the details of three different applications. Those applications are COP, CIP, and HTST. I will address these details in three separate papers to follow.

