

Reducing Energy Cost by Cleaning and Sanitizing Effectively

“Cold Water” and Eco-Gentle Technologies

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Evaluate Effective Cleaning Products that will remove research animal soils at ambient temperatures

- Organic acid blends
- Enzyme “Cold Water Technology”
- Citrus Solvent Degreasers
- Improved one-step disinfectant cleaners
- Chlorine dioxide sanitizer for washers



Traditional Cleaning Agents

- Use 140 to 160 degree water
- Use harsh chemicals that require pH extremes to work
- Require heating water to 180 degrees for a sufficient time to sanitize 99.9% of micro-flora



Standard Rack Washer Cycle

- Averages 4800 BTUs of energy to heat water to achieve sanitation
- Averages 35 minutes or longer to clean, sanitize and rinse cages using hot water
- More than 50% of a cycle time is involved with meeting temperature set points



“Cold Water” Rack Washer Cycle

- Reduces energy costs by not using 4800 BTU’s to heat water (approximately \$10.00 per load in electrical energy savings)
- Reduces “carbon footprint”, less fossil fuel, less fuel consumed
- Reduces operating cost by eliminating replacement of expensive heat transfer systems, parts and labor
- Reduces environmental impact by not wasting water to cool heated water before draining
- Reduces electrical power required for ventilation and longer washer cycles



Verification of Cold Temperature Cleaning and Sanitizing

- Verification using micro-biological growth media
- Verification using ATP monitoring and surface sampling
- Verification of chemical range using Chlorine dioxide titration or color-metric tests for testing water

“Cold Water Technologies”

Cleaning and Sanitizing

- Kennel cleaning requires special acid blends and degreasers to remove residues
- Social Housing Enclosures require cleaners and disinfectants that clean and disinfect zoonotic pathogens
- Enrichment Equipment (special disinfectants and cleansing will require completely free rinsing properties)



Advancing “Cold Water” Technologies

- Foaming Applications-increasing contact times!
- Scrub brushes with better design-elbow grease required
- Faster Cleaning-Enzyme pretreatment will break down organic soil with little or no agitation
- No Residue-Improved disinfectant cleaners will penetrate heavier soils and disinfect at the same time
- No Residual-Improve rinsing of chemical cleaners and disinfectant will save time, water and energy



Global Warming

“The Cost of Using Heat”

- Not just a savings in energy dollars but Environmental Impact to our atmosphere by reducing carbon emissions

