



**Spartan Chemical Company, Inc.**  
**Manufacturer of Guaranteed Specialty Maintenance Products**  
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Cleaning issues and infection control at public facilities have moved to the forefront of media coverage and consumer consciousness due to the recent, well publicized pandemic of SARS-CoV-2. Spartan already provides a complete line of EPA registered disinfectants and hand washes designed to assist with infection control. With Spartan's commitment to laundry the question has been posed, what role does laundry play in infection control?

Laundry in a health-care facility may include bed sheets, blankets, towels, personal clothing, patient apparel, uniforms, scrub suits, gowns, and drapes for surgical procedures.<sup>1</sup> Contaminated textiles and fabrics often contain high numbers of microorganisms from body substances including blood, skin, stool, urine, vomitus, and other body tissues and fluids. **According to the CDC, contaminated laundry used in health-care settings are disinfected during the laundering process and generally rendered free of vegetative pathogens (i.e., hygienically clean).**<sup>2</sup> The antimicrobial action of the laundering process results from a combination of mechanical, thermal, and chemical factors.<sup>3</sup> The laundering process consists of a flush, main wash or suds, bleaching, rinsing, and souring.

Dilution and agitation in the water removes substantial quantities of microorganisms. The initial flush often incorporates a pH booster to expedite this process. Detergents function to suspend soils and microorganisms during the wash cycle and prevent them from redepositing back onto the fabric. Hot water provides an effective means of destroying microorganisms as does washing at an elevated pH.<sup>4</sup> While hot water washing is commonly recommended by many state licensing agencies, the CDC does not forbid cold water washing. In fact, as recently as 2015, the CDC now advises facilities to simply follow the guidance of their chemical provider and the chemical instructions when washing in temperatures below 160°F. Regardless of whether hot or cold water is used for washing, the temperatures reached in drying and especially during ironing provide significant microbiocidal protection.<sup>5</sup> The use of chlorine or oxygen bleach (50 – 150 ppm) assures an extra margin of safety. Chlorine bleach becomes activated at water temperature of 135 °F – 145 °F and oxygen bleach becomes activated above 145 °F. The last of the series of rinse cycles is the addition of a mild acid (sour) to neutralize any residual alkalinity in the water supply or on the fabric. Finally, the rapid shift in pH from approximately 12 to 5 is an effective means to inactivate most microorganisms.<sup>5</sup>

Spartan's Clothesline FRESH™ Laundry Care line provides all of the necessary chemicals needed to ensure a hygienically clean laundry process as outlined by the CDC. **Clothesline FRESH™ Laundry Break** and **Liquid Alkali** will boost the pH of the initial flush, as well as containing an excellent environmentally preferred water softener. **Clothesline FRESH™ Laundry Detergent, No Dye - No Fragrance Laundry Detergent, and Enzyme Laundry Detergent** are all highly concentrated detergent that provides superior soil suspension and anti-redeposition performance. **Clothesline FRESH™ BLD** and **Xtreme Hard Water Built Detergent** are not only a great industrial strength laundry detergents, but also boost the pH of the wash water and improve water quality. **Clothesline FRESH™ Chlorine Bleach** is an industrial grade chlorine based bleach while **Clothesline FRESH™ Xtreme Oxygen**

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<sup>1</sup> Rutala WA, Weber DJ. "Uses of inorganic hypochlorite (bleach) in health-care facilities." Clin Microbiol Rev 1997; 10:597–610.

<sup>2</sup> Barrie D. "How hospital linen and laundry services are provided." J Hosp Infect 1994; 27:219–35.

<sup>3</sup> Mouton RP, Bekkers JH. "Bacteriological results of routine procedures in a hospital laundry." Folia Med Neerl 1967; 10:71–6.

<sup>4</sup> Arnold L. A. "Sanitary Study of Commercial Laundry Practices." Am J Public Health 1938; 28:839–44.

<sup>5</sup> Blaser MJ, Smith PE, Cody HJ, Wang W-LL, LaForce FM. "Killing of fabric-associated bacteria in hospital laundry by low-temperature washing." J Infect Dis 1984; 149:48–57.



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**Bleach** is a highly concentrated active oxygen bleach safe for most colored fabrics. **Clothesline FRESH™ Laundry Sour and Xtreme Laundry Sour** will neutralize residual alkalinity and bring the pH of the finished wash down to a desirable skin comfort level (5.5 – 6.5). **Clothesline FRESH™ Sour/Softener** will impart a fresh scent and soft touch to the fabric, while at the same time neutralizing residual alkalinity and ensuring proper final wash pH. The Clothesline FRESH™ Laundry Care line also offers a highly concentrated fabric softener, **Clothesline FRESH™ Fabric Softener**, which will leave clothes feeling soft and smelling fresh. For an added level of security, Spartan offers **Clothesline FRESH™ Softener/Sanitizer**, an EPA registered laundry sanitizer.

Spartan's laundry care line is not only an excellent way to ensure a hygienically clean laundry process, but a technologically advanced, economical approach to industrial laundry. Consult your local chemical provider to help ensure that all steps are being taken care of to ensure proper laundry practices are being followed. Spartan's Clothesline FRESH™ Laundry Care Program is an environmentally preferable approach to laundry that also provides superior cleaning performance. Trust in Spartan Chemical to provide you with the proper laundry chemicals to assist with infection control as well as to provide you with all of the chemicals needed for hard surface disinfection, hand washing, and floor care. If any additional information is needed, please feel free to contact me at 1.800.537.8990.

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