



# Reducing Bacteria in Clothing and Textiles

Kansas State University • Cooperative Extension Service • Manhattan, Kansas

Clothing and textiles that have been in contact with floodwater need to be sanitized because floodwater may be contaminated with sewage wastes. Bacteria from floodwater can remain alive on fabrics for a long time. A disinfectant destroys harmful bacteria. For disinfecting, use only products that display an EPA Registration Number on the label and have laundering instructions for disinfecting. Wash items in small loads in full water levels in your washing machine. Two types of disinfectants are effective on fabrics. Use whichever is appropriate for the particular fabric.

## Quaternary Compounds

Quaternary compounds are safe for fibers, will not damage wool or silk, but may cause some color change.

- Common brands commonly available in Kansas are Roccal<sup>1</sup> and Zephrein<sup>1</sup>
- Add at the beginning of the rinse cycle - 4 tablespoons Roccal or 2 tablespoons Zephrein for top-loading automatics; 2 tablespoons Roccal or 1 tablespoon Zephrein for front-loading automatics.

Quaternary compounds are available at dairy or janitorial supply houses or some drug stores.

## Chlorine Bleaches

Liquid chlorine bleaches are safe for most fibers except wool, silk or resin-coated (water-proof or water repellent) fabrics, but may cause color fading.

- Be sure that your colors are colorfast, best on white fabrics.
- Add bleach to water before putting in clothes or dilute bleach in 1 quart water

before adding to the wash cycle.

- Use 1 cup in top loading automatics; 1/2 cup in front loading automatics.
- Do not use bleach in the rinse cycle.
- Be certain that the percentage of hypochlorite is 5.25%. Read the label.
- Some brands commonly available in Kansas:

Always Save Chlorine Bleach, Purex Bleach<sup>1</sup>,

Best Choice Bleach, Top Crest Bleach or Fresh Scent Bleach, Blue Ribbon Chlorine Bleach, Value Time Liquid Bleach, Clorox Regular or Fresh Scent Bleach<sup>1</sup> (Bleach labeled "color safe" is not a chlorine bleach and will not sanitize.)

Available in grocery stores, discount stores and hardware stores.

**The following cleaners will reduce bacteria, but not completely disinfect:**

## Pine Oil Cleaners

Pine oil cleaners are safe for washable clothing to help remove odors and help sanitize. Do not use them on wool or silk because the pine odor will linger in these fabrics. A pine oil cleaner should be at least 70% pine oil to disinfect. The higher the percentage of pine oil (19% or above) the more bacteria they kill.

Check for colorfastness by testing on a hidden area of the item.

<sup>1</sup>Contain both EPA Registration Number and laundry instructions for disinfecting.

- Add pine oil at the beginning of the wash cycle, preferably before the clothes are in the machine. Otherwise, dilute in one quart water before adding to machine.
- Use 1/2 cup with your regular detergent.
- Some brands commonly available in Kansas:  
King Pine, Pine Plus, Pine-So, Spic and Span Pine, Lysol Pine Action, Pine Power, Real Pine

Available in grocery stores, discount stores, hardware stores and drug stores.

## **Phenolic cleaners**

Phenolic cleaners are safe for washable clothing.

- Avoid wool and silk, because the odor will remain.
- Use 1 cup in a top loading automatics; 1/2 cup plus 2 tablespoons in front loading automatics.
- Add in either the wash or rinse cycle.
- Common brands available in Kansas:  
Lysol Disinfectant Liquid Concentrated (a phenolic/quaternary mixture)

Available in grocery and discount stores.

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