



Surfactants can cause Resistance

Reducing the development of antibiotic resistant bacterial populations is no longer just an issue for hospitals. We all need to do what we can, because the same conditions that promote resistance operate not only in hospitals but in other environments as well.

Microbiology 2023

[Biological and synthetic surfactant exposure increases antimicrobial gene occurrence in a freshwater mixed microbial biofilm environment](#)

Int. J. Environ. Res. Public Health 2023,

[Organic Compounds and Antibiotic-Resistant Bacteria Behavior in Greywater Treated by a Constructed Wetland](#)

Heliyon (2023)

[Direct Environmental concentrations of surfactants as a trigger for climax of horizontal gene transfer of antibiotic resistance](#)

Water Research Volume 236, 1 June 2023, 119944

[Direct The structure of biodegradable surfactants shaped the microbial community, antimicrobial resistance, and potential for horizontal gene transfer](#)

Environmental Science & Technology 2023 57 (20), 7645-7665 DOI: 10.1021/acs.est.2c08244

[Quaternary Ammonium Compounds: A Chemical Class of Emerging Concern](#)

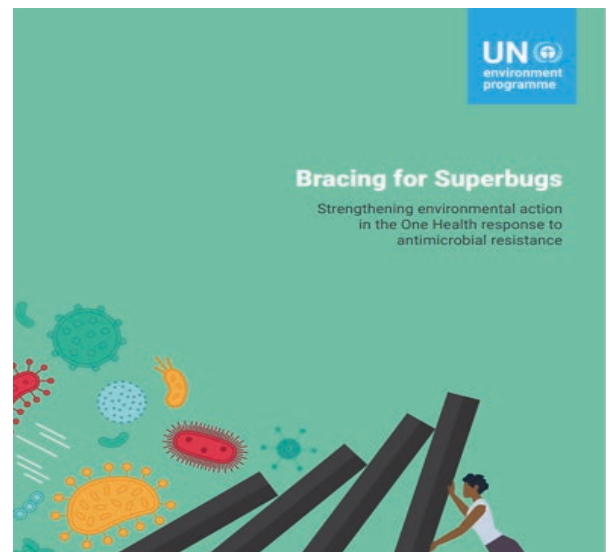
Policy Recommendations - Immediately address the known threat of antimicrobial resistance. The medical field recommends that antibiotics be prescribed only when necessary and educate the public about proper use. Similar efforts to eliminate non-essential uses of antimicrobial QACs in consumer products are warranted. An example would be product labeling requirements such as

“To reduce the public health threat of antimicrobial resistance, use this product only when disinfection is necessary and not for general cleaning”.

Manufacturers should also be discouraged from implying a health benefit of QAC use in coatings durable product treatments without supporting evidence that these treatments are effective in reducing the transmission of infectious diseases.

[2023 United Nations Environment Programme](#)

The environmental dimensions of AMR include pollution from hospital and community wastewater, effluent from pharmaceutical production, run-off originating from plant and animal agriculture and other forms of waste and releases. These matrices may contain not only resistant microorganisms, but also antimicrobials, various pharmaceuticals, microplastics, metals and other chemicals, which all increase the risk of AMR in the environment. Polluted waterways, particularly those that have been polluted for some time, are likely to harbour microorganisms that increase AMR development and distribution in the environment. With increasing pollution and lack of management of sources of pollution, combined with AMR in clinical and hospital settings and agriculture, risks are increasing.





Fortunately, new cleaning strategies involving detergent free cleaning with safer, more dilute forms of PCS Stabilized Hypochlorous Water Cleaning Without Harming.

Created from our Neutral pH Hypochlorous Acid / Sodium Hypochlorite Solutions.



PCS Hypochlorous water Surface Cleaning without Harming. Cleans with 50 ppm of Hypochlorous Acid.

PCS 1000 Plus Oxidizing Disinfectant Cleaner
DIN :02521431

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- Category 4 Hospital Grade Disinfectant
- Meaning the label and SDS sheets do not require
- Warning or Caution Symbols
- Oxidizing cleaner
- Oxidizing hospital grade disinfectant
- Oxidizing broad spectrum virucide
- USE PCS hypochlorous water to clean at 50 ppm
- Proven to remove greater than 99% of Staph and 92.8% of C. difficile spores.
- Disinfect with PCS 1000 Plus Oxidizing Disinfectant Cleaner

No need to use disinfectants that are more harmful and contain Synthetic detergent surfactants that deposit residues in the environment that contribute to the creation of Antibiotic Resistant Pathogens.

Right to Know

- Chemical Name CAS#
- Water 7732-18-5
- Sodium Hypochlorite 7681-52-9
- Acetic Acid 64-19-17
- Sodium Hydroxide 1310-73-2
- Sodium Bicarbonate 144-19-8
- Sodium Carbonate 497-19-8
- Sodium Chloride 7647-14-5

We offer the potential of combating the bacterial resistance dilemma. With this cleaning method, the bulk of the pathogenic bacteria problem is solved by physical removal during efficient Cleaning Without Harming. In most commercial and institutional settings cleaning is sufficient to protect public health.

In healthcare facilities or when recommended by Public Health the remaining microbial population is oxidized with our PCS 1000 Plus Oxidizing Disinfectant Cleaner containing both Hypochlorous Acid and Sodium Hypochlorite. PCS process leaves no lingering contaminants on surfaces or in our waste water thereby avoiding the development of resistant bacterial strains.

PCS products contain only naturally occurring ingredients, free of any petroleum-based ingredients, detergent surfactants, phosphates and volatiles. Approximately 15 per cent of the total population has increased sensitivities to even very low levels of chemical exposures. These products are independently reviewed and certified by Envirosdesic for use by and around hypersensitive individuals.

The company also provides Complete Ingredient Disclosure on all cleaning product labels. The company supports the safe use of Hypochlorous Acid because of it's safe potent oxidizing power and rapid decomposition, which minimizes the potential for the development of bacterial resistance.



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