Antibacterial soaps and disinfectants with long-lasting activity against both gram-negative and gram-positive bacteria

Technology #cu12158

Antibacterial soaps and disinfectants are widely used in hospital settings, cleaning supplies and personal care products to prevent transmission of pathogens. Although routinely used, many of these antibacterial agents are generally ineffective in preventing the acquisition and proliferation of new pathogens after disinfection. Furthermore, many antibacterial agents are irritants and have concerning environmental effects. This technology describes gentler antibacterial soap and disinfectant formulations. These formulations are designed to permeate into the upper layers of the skin and provide persistent antibacterial activity for hours after hand-washing.

Antibacterial soap formulations permeate into the upper layers of the skin to generate a lasting antimicrobial effect

Compliance with hand-washing guidelines in the healthcare industry is lower than expected. The long-lasting antimicrobial effect of the formulations described by this technology may reduce the number of hand washings required to maintain sterile hands, decreasing the number of pathogens spread. The formulations contain emollients as active ingredients that allow for the permeation of benzyl alcohol, sequiterpenoids, and other antibacterial agents.

The technology was experimentally confirmed on the hands of human volunteers as well as with an in vitro pig skin model. The results demonstrated that the formulation efficiently reduces the activity of both gram-negative (E. coli) and gram-positive (S. aureus) bacteria for up to an hour after use.

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Applications:

- Antimicrobial soap for healthcare settings
- Antimicrobial surgical scrubs
- Medical device sterilization
- Topical skin cleansers (face washes, body washes, etc.)
- Wound dressing for burns or other skin infections.
- Disinfecting wipes.

Advantages:

- Permeates the first layer of skin providing protection for hours after hand-washing

Patent Information:

Patent Pending (US 20140243417)
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Patent Pending (WO/2013/067150)

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Related Publications:


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