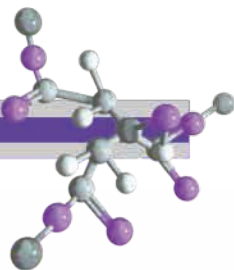


SILVÉRIION²⁴₀₀



SILVÉRIION[®] 2400 Skin Active for Personal Care



SILVÉRIION 2400 is a water-soluble, natural antimicrobial containing Silver Dihydrogen Citrate (SDC), a revolutionary, novel ionic silver technology for use in antimicrobial skin care formulations.

Features and Benefits

- Active against a broad range of microorganisms
- Rapid efficacy
- Excellent water solubility
- Effective at low concentrations
- Good compatibility with cosmetic ingredients
- Protects against harmful bacteria
- Easy to formulate
- Broad range of product forms possible
- Cost-effective formulations

Differentiate your product
with SILVÉRIION[®] 2400



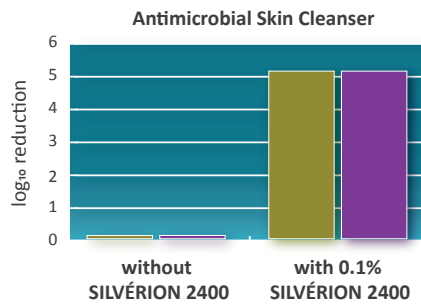
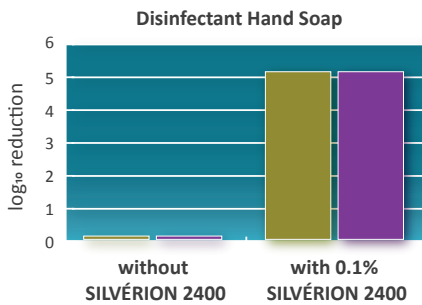
SILVÉRIION® 2400

Skin Active for Personal Care

Rapid, Broad-spectrum Efficacy

SILVÉRIION 2400 shows broad-spectrum activity against Gram-negative and Gram-positive bacteria including pathogenic bacteria such as *Staphylococcus aureus*, *Escherichia coli* and *Pseudomonas aeruginosa*, as well as yeasts and molds. Concentrations as low as 0.1% - 0.3% SILVÉRIION 2400 provide excellent efficacy against harmful and unwanted bacteria in rinse-off and leave-on skin care products.

Bacterial Effect in Rinse-off Formulations



Method

9 mL of the test product were inoculated with 1 mL of a bacterial aqueous suspension to a final microbial load of 10⁸ bacteria per mL.

The number of viable bacteria was determined 5 minutes after inoculation.

■ *Staphylococcus aureus* ATCC 6538
■ *Pseudomonas aeruginosa* ATCC 9027

Reduction of Bacteria in a Hand Cream

Staphylococcus aureus ATCC 9144



Hand Cream without 0.3% SILVÉRIION 2400



Hand Cream with 0.3% SILVÉRIION 2400

Salmonella choleraesuis ATCC 9184



Hand Cream without 0.3% SILVÉRIION 2400



Hand Cream with 0.3% SILVÉRIION 2400

Method

Hand creams with and without SILVÉRIION 2400 were contaminated with the test bacteria (10⁸ bacteria per gram product and incubated over night). Subcultures of the hand creams were streaked on agar plates for the detection of viable bacteria.

Antimicrobial Active for Diverse Product Categories

SILVÉRIION 2400 is compatible with a wide range of cosmetic ingredients and is stable in formulations with pH < 7. Good compatibility with anionic and non-ionic surfactants and emulsifiers as well as amphoteric surfactants, allows SILVÉRIION 2400 to be used in rinse-off and leave-on formulations including:

- Liquid hand soaps
- Skin cleansers
- Body washes
- Hair shampoos
- Lotions and creams for facial and body care
- Wet wipes
- Clear gels

Typical use concentrations of SILVÉRIION 2400 are between 0.1% - 0.3% in leave-on and rinse-off formulations.

- SILVÉRIION 2400 is water soluble and easy to incorporate into the aqueous phase of gels, surfactants and emulsions produced in a cold process. During manufacturing of emulsions produced by hot process, SILVÉRIION 2400 should be added to the final formulation after it has cooled down. In order to ensure optimal performance and stability, pH above 7 should be avoided as well as high salt concentrations.
- SILVÉRIION 2400 has demonstrated effectiveness against pathogenic bacteria and other unwanted microorganisms allowing a broad range of product formulations that offer significant reduction of microorganisms on the skin, including protection against bacteria which cause pimples and oily skin.

Differentiate your product
with SILVÉRIION® 2400



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