



K-CARE[®] CHG PRESERVATIVE

General Description

Chlorhexidine, also known as chlorhexidine gluconate (CHG), is a disinfectant and antiseptic. It is used in disinfectants (disinfection of the skin and hands), cosmetics (additive to creams, toothpaste, deodorants, and antiperspirants), and pharmaceutical products (preservative in eye drops, active substance in wound dressings and antiseptic mouthwashes).

K-CARE[®] CHG PRESERVATIVE, the CDI trade name of chlorhexidine gluconate (CHG), is effective against a range of microorganisms. It came into medical use in the 1950s. It is on the World Health Organization's List of Essential Medicines, the safest and most effective medicines needed in a health system.

Chlorhexidine gluconate is active against Gram-positive and Gram-negative organisms, facultative anaerobes, aerobes, and yeasts. It is particularly effective against Gram-positive bacteria (in concentrations $\geq 1 \mu\text{g/l}$). Significantly higher concentrations (10 to more than 73 $\mu\text{g/ml}$) are required for Gram-negative bacteria and fungi.

Chlorhexidine gluconate, like other cation-active compounds, remains on the skin. It is frequently combined with alcohols (ethanol and isopropyl alcohol). At physiologic pH, chlorhexidine salts dissociate and release the positively charged chlorhexidine cation. The bactericidal effect is a result of the binding of this cationic molecule to negatively charged bacterial cell walls.

Typical Properties

Item	Standards
Active Ingredient: Chlorhexidine digluconate	18-22%
Appearance	Colorless to pale yellow
Odor	Faint, medicine-like
pH at 25°C:	5.5 – 7.0 (50g/l)
Clarity and color of solution	When freshly prepared is clear and colourless
Melting range	78.0~82.0°C
Loss on drying	$\leq 0.50\%$
Density at 20°C:	1.04-1.08 (20 °C)
Solubility	Soluble in water, 21 g/L in ethanol, 35 g/L in isopropanol, 44 g/L in acetone

Applications

Sector	Pattern of Use
Skin care application	Pre-operative scrub, Bathing and showering solution for patients. Antiseptic skin wipes. Gauze and Catheter dressing
Oral Hygiene	Mouthwash and Tooth Paste
Hand Hygiene	Hand Sanitizer and rubbing waterless gel

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