Sports and Supports

ADVanxe

Play safe, feel free

con IALUVANCE COMPLEX™

A product range to meet the requirements for use against
bacteria and
emerging viral pathogens
(in skin and surfaces)
such as SARS-CoV-2*

BIOCIDE**

* Data on File: BcoV-1 test on COVID-19

** [Autorizzazione in deroga ex art.55.1 BPR]

Opportunity

AD-VANXE® product range is the only range of products available based on patented **IALUVANCE COMPLEX™** (proprietary association of hydrogen peroxide and hyaluronic acid) to prevent viral and bacterial infections through contact with contaminated surfaces These products contain Hydrogen Peroxide at a high concentration and act as a barrier from infections.

Products Description

AD-VANXE HAND SPRAY SANITIZER

BIOCIDE

AD-VANXE Hand Sanitizer is based on patented **IALUVANCE COMPLEX™** indicated for cleansing and sanitization of the hands and skin.

Advantages:

- Fresh and Clean Scent
- Quick drying
- Alcohol free
- VOC free
- Phenol free
- Contains no phosphates
- No rinsing required
- Appropriate for daily use
- No water required

Products Description

AD-VANXE SPRAY SPORT SANITIZER

BIOCIDE

AD-VANXE Sport Sanitizer based on patented **IALUVANCE COMPLEX™** is a spray specifically suitable for cleaning and sanitizing sports balls in contact with hands because Dermatologically Tested do not Irritate and Damage the skin. This product is made from oxygenated water Suitable also for cleaning and sanitizing all sports surfaces and equipment, painted metals, steel parts and plastics. The oxidizing capacity of oxygenated water allows the breakup of dirt and the elimination of colored stains and bad odors.

Advantages:

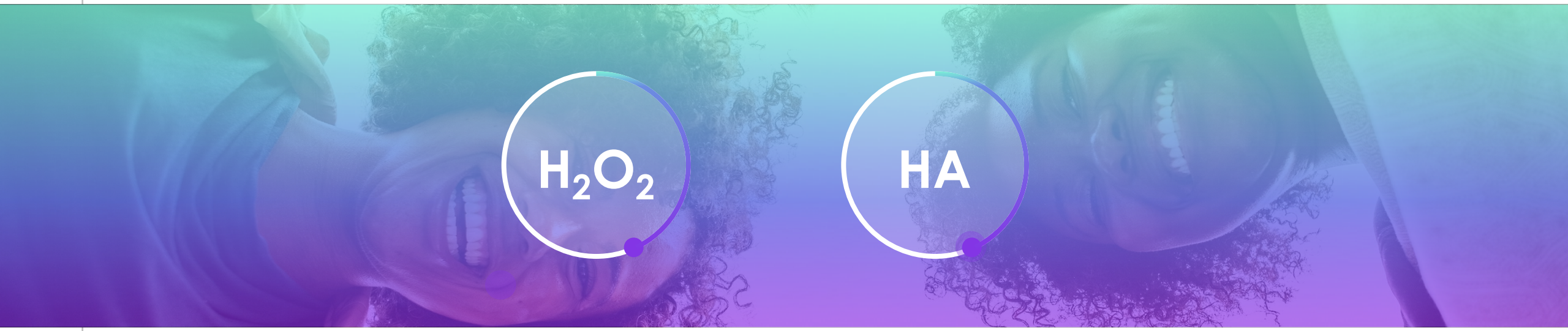
- Fresh and Clean Scent
- Alcohol free
- No rinsing required
- Appropriate for daily use
- Effective for food contact surfaces

DERMATOLOGICALLY - TESTED

AD-VANXE® SPRAY SPORT
IT IS DERMATOLOGICALLY TESTED.
DO NOT IRRITATE AND DAMAGE THE SKIN

The Technology

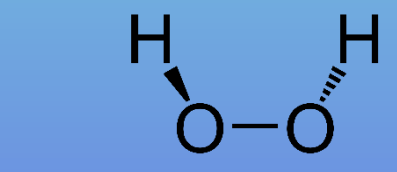
IALUVANCE COMPLEX™

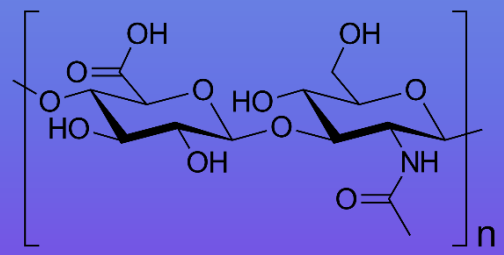


AD-VANXE product range is differentiated by the presence of **IALUVANCE COMPLEX™**, a proprietary association of hyaluronic acid and hydrogen peroxide.

Ingredients & Mechanism of Action

- **Hydrogen peroxide** is a chemical compound that acts as a mild antiseptic and comes in various potencies.
- It has strong oxidation in order to disinfect the wound tissue; it is also useful for removing cellular and pathogenic debris and promotes the secretion of cytokines that promote tissue regeneration.
- H_2O_2 facilitates hemostasis by different mechanisms that include activation of different tissue growth factors, promotion of platelet aggregation, and regulation of contractility and barrier function of endothelial cells.
- H_2O_2 can improve the expression of inflammation related genes and the synthesis of proinflammatory cytokines including TNF-α, IL-1β, IL-5 IL-8 and IFN-α.



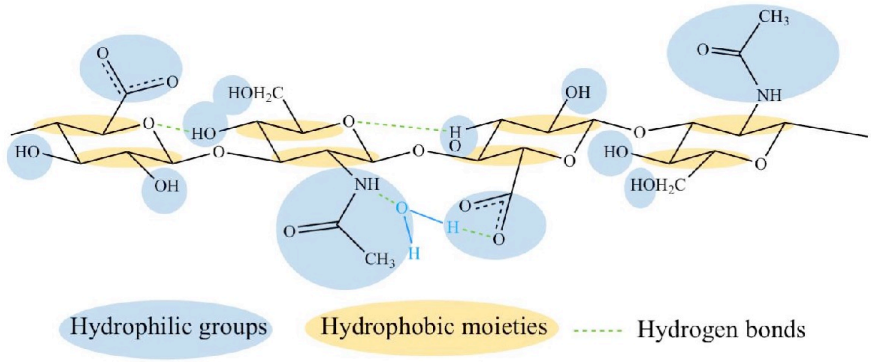


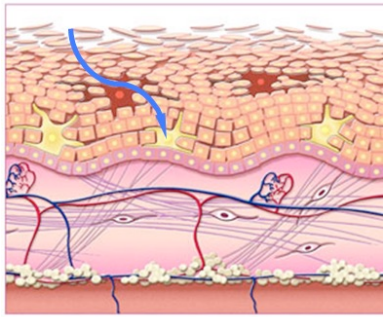
- **Hyaluronic acid** is one of the main components of the extracellular matrix and is widely distributed in different tissues such as skin, synovial fluid, cartilage, tendons, eyes, and most part of body fluids.
- It also plays an important role in the tissue healing process by promoting the development of granulation tissue, reducing inflammatory negative composition, angiogenesis, promoting the migration of cells, adherence and proliferation of undifferentiated mesenchymal cells, inducing their differentiation.
- Epidermal HA also functions as a manipulator in the process of keratinocyte proliferation, which is essential in normal epidermal function, as well as during reepithelization in tissue repair.

Hyaluronic Acid Charactristics

Sneaking effect

Hydrophilic groups and hydrophobic moieties are simultaneously present in sodium hyaluronate molecule and it is precisely because of this amphiphilic nature that it is able to penetrate with the sneaking effect through the upper lipid layers of the epidermis.

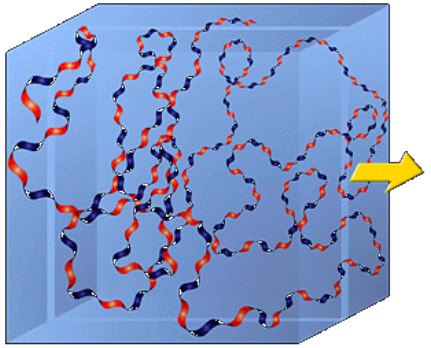


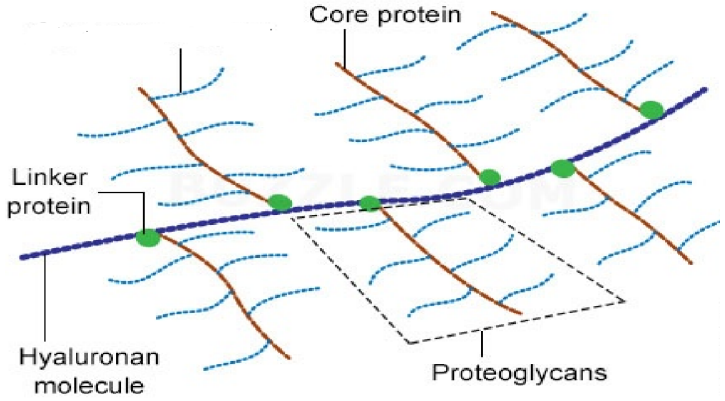


Moisturizing effect

Hyaluronan can retain water almost 100-1000 times its weight and this ability makes it an excellent moisturizer with emollient properties.

It is combined with different proteins (aggrecans) to form complexes structures fundamental for the skin firmness and elasticity.



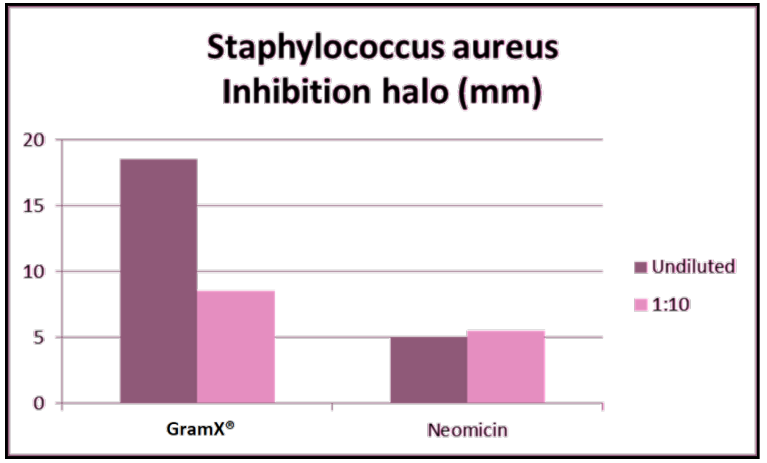


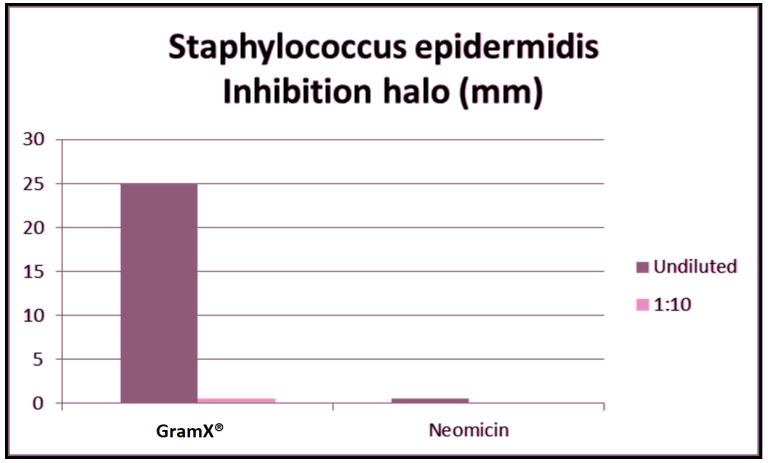
H2O2 Clinical Evidence

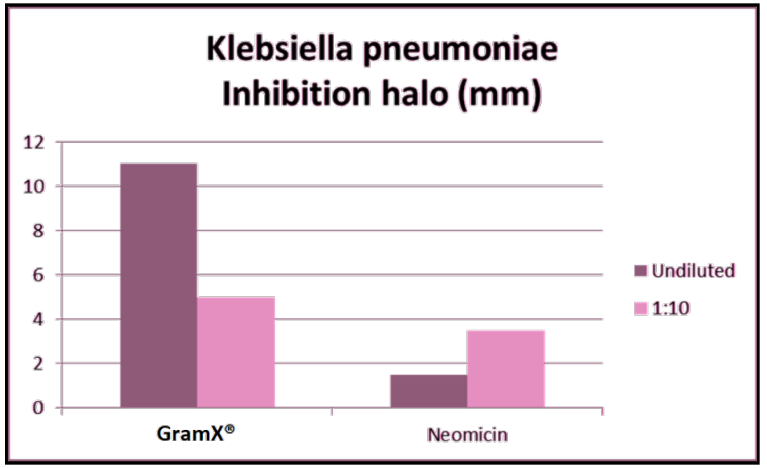
Evaluation Of The Antimicrobial Effectiveness In Contact Test – Comparison Between Different Formulations

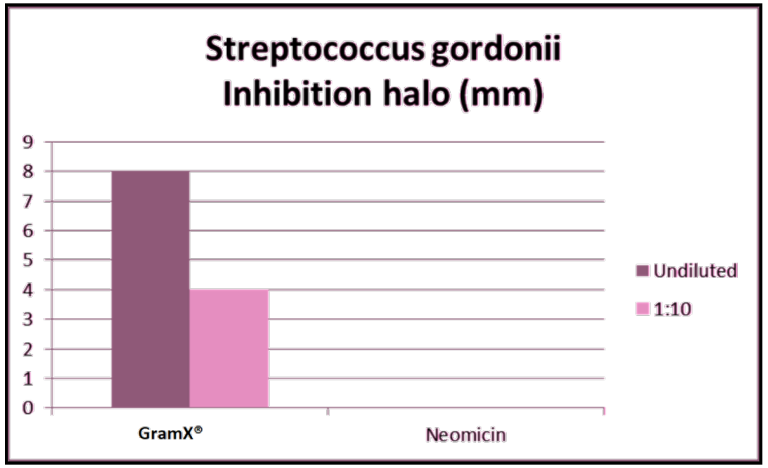
- **Study Purpose:** The purpose of the test was to evaluate the antimicrobial effectiveness of topical use products against one or more microbial strains.

- **Evaluation:** The evaluation is done through visual analysis of the plates with magnifying glass and evaluating the microbial growth reduction in the agar around and below the sample, with respect to the control. If a measurable inhibition halo is present, it is measured in mm.







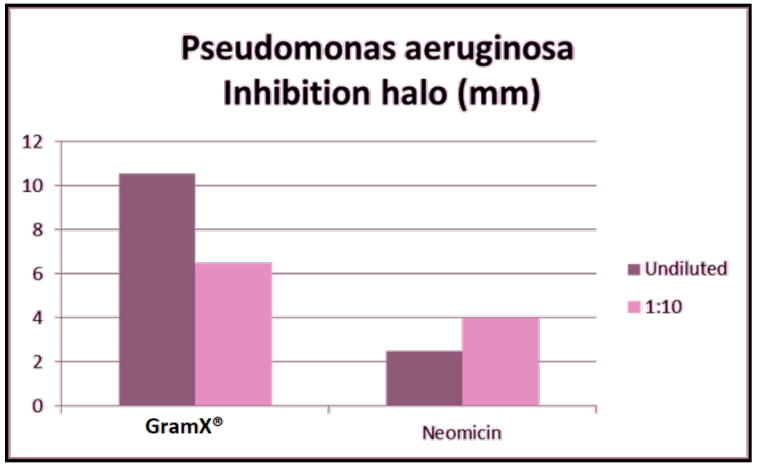


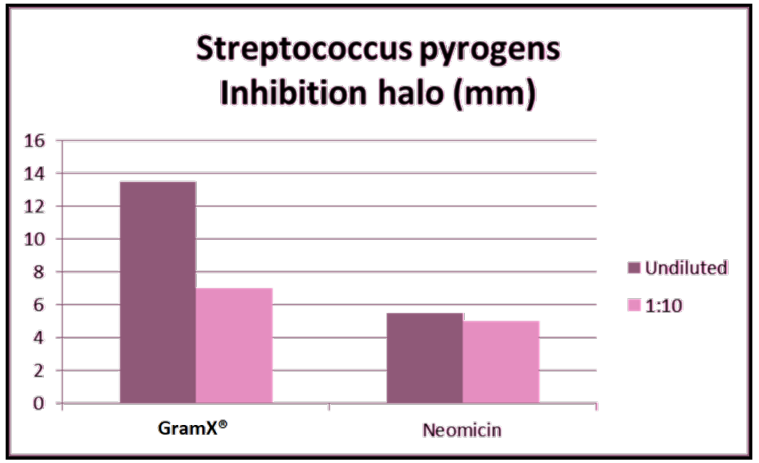
H2O2 Clinical Evidence

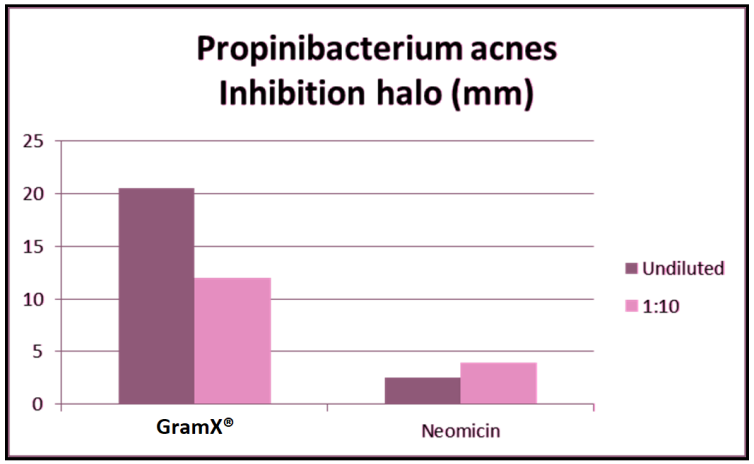
Evaluation Of The Antimicrobial Effectiveness In Contact Test – Comparison Between Different Formulations

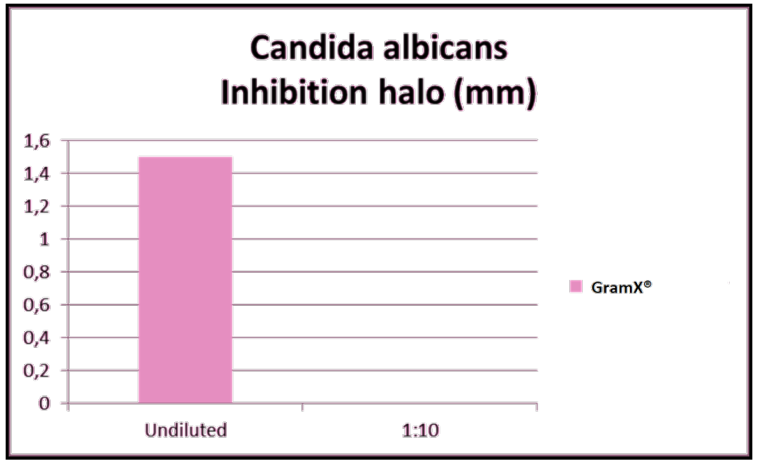
- **Study Results:** AD-VANXE showed excellent antimicrobial effect against all the bacterial strains, both when tested undiluted or diluted 1:10. Excellent antimicrobial effect against Candida albicans when tested undiluted; no antimicrobial effect when tested diluted 1:10.

- Neomicin showed excellent antimicrobial effect against P.aeruginosa, S.aureus, S.pyogenes, K.pneumoniae, P.acnes, both when tested undiluted or diluted 1:10; excellent antimicrobial effect against S.epidermidis when tested undiluted and slight antimicrobial effect when tested diluted 1:10; no antimicrobial effect against S.gordonii.









H2O2 Clinical Evidence

Evaluating the virucidal efficacy of hydrogen peroxide vapor

- **Study Purpose:** To evaluate the in-vitro efficacy of hydrogen peroxide vapour (HPV), a vapour-phase disinfection method, for the inactivation of a number of structurally distinct viruses of importance in the healthcare, veterinary and public sectors. The viruses studied were: feline calicivirus (FCV, a norovirus surrogate); human adenovirus type 1; transmissible gastroenteritis coronavirus of pigs (TGEV, a severe acute respiratory syndrome coronavirus [SARS-CoV] surrogate); avian influenza virus (AIV); and swine influenza virus (SwIV).

- **Methods:** The viruses were dried on stainless steel discs in 20- or 40-µL aliquots and exposed to HPV produced by a Clarus L generator (Bioquell, Horsham, PA, USA) in a 0.2-m3 environmental chamber. Three vaporized volumes of hydrogen peroxide were tested in triplicate for each virus: 25, 27 and 33 mL.

- **Study Results:** No viable viruses were identified after HPV exposure at any of the vaporized volumes tested. HPV was virucidal (>4-log reduction) against FCV, adenovirus, TGEV and AIV at the lowest vaporized volume tested (25 mL). For SwIV, due to low virus titre on the control discs, >3.8-log reduction was shown for the 25-mL vaporized volume and >4-log reduction was shown for the 27-mL and 33-mL vaporized volumes.

- HPV was virucidal for structurally distinct viruses dried on surfaces, suggesting that HPV can be considered for the disinfection of virus-contaminated surfaces.

H2O2 Clinical Evidence

Combined application of simulated reuse and quantitative carrier tests to assess high-level disinfection: Experiments with an accelerated hydrogen peroxide-based formulation

- **Study Purpose:** The purpose of this study was to combine the US Environmental Protection Agency's and the Food and Drug Administration's recommended simulated reuse method with recently developed quantitative carrier tests (QCT) to assess the broad-spectrum germicidal activity of a 7% solution of accelerated hydrogen peroxide (pH 2.9) stressed for 14 days.

- **Methods:** On alternate days baths with 3 lots of the test formulation were stressed by the addition of bacteria (Salmonella choleraesuis, Staphylococcus aureus, and Pseudomonas aeruginosa) on glass beads and spores (Bacillus subtilis and Clostridium sporogenes) on metallic penicylinders. In addition, one set of respiratory therapy equipment was subjected to 3 daily cycles of disinfection in each bath. The pH and H2O2 levels in the test samples were measured, and they were also subjected to QCTs for their sporicidal, bactericidal, virucidal, fungicidal, and mycobactericidal activities.

- **Study Results:** After 14 days of reuse, the pH of the test solutions remained essentially unchanged. Although the level of H2O2 dropped from a high of 7.66% to as low as 6.40%, all lots showed the required level of broad-spectrum germicidal activity after 14 days of stress.

- The stress test and QCT were successfully combined in demonstrating the broad-spectrum germicidal activity of a high-level disinfectant subjected to 14 days of simulated reuse.

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ADVanxe

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