As an antibacterial agent, the risk of nosocomial infection is greatly diminished, and an uneventful clinical result is facilitated. Bacterial growth cannot occur in the formulation and on contact death rapidly ensues as cellular water diffuses from the cell into the product" Prince et al (2017).

Abstract:

Background: Medical adhesives effectively hold closed approximated skin edges of wounds from surgical incisions, including punctures from minimally invasive surgery. In addition, they have been reported to be antibacterial against gram-positive bacteria.

Methods: Using membrane filtration to capture all organisms after contact with 2-octyl cyanoacrylate product for 3 minutes, we quantified the number of survivors. Controls were performed to rule out that the noted level of kill was caused by carryover product in the test system.

Results: We found that the product kills >7 logs of gram-positive and gram-negative bacteria. The mechanism of action for the antibacterial effect is described as a function of very low water content.

Conclusions: As an antibacterial agent, the risk of nosocomial infection is greatly diminished, and an uneventful clinical result is facilitated. Bacterial growth cannot occur in the formulation and on contact death rapidly ensues as cellular water diffuses from the cell into the product.

Reference:

Prince, D., Solanki, Z., Varughese, R., Mastej, J. and Prince, D. (2017) Antibacterial effect and proposed mechanism of action of a topical surgical adhesive. American Journal of Infection Control. August 22nd. .

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