Technical Data Monograph

PRE-KLENZ™ Point of Use Processing Gel
Dispensing and Cling Properties
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Purpose

Pretreatment of soiled surgical instrumentation at point of use is recommended by multi-industry guidelines\textsuperscript{1-3} in order to begin and facilitate the decontamination process. A variety of pretreatment products are available in the market today, although many have drawbacks when it comes to ease of use and efficacy. PRE-KLENZ Point of Use Processing Gel is a ready-to-use, neutral pH gel designed to keep soils moist and initiate the cleaning process on reusable surgical instruments at the point of use. The gel technology allows PRE-KLENZ Point of Use Processing Gel to cling to instrument surfaces longer than products dispensed as liquids or foams, and the easy-dispense package enables instrument coverage with the simple push of a button, at any angle.

Methods

Dispensing and Coverage properties

To compare the dispensing and coverage properties of PRE-KLENZ Point of Use Processing Gel versus other commercially available pretreatment products, the products were dispensed onto approximately 18.5 cm diameter paper circles. Product dispensing and coverage patterns were documented photographically.

Cling properties

To compare the cling properties of PRE-KLENZ Point of Use Processing Gel versus other commercially available pretreatment products, the products were dispensed onto pre-weighed stainless steel panels. After application, the panels were weighed, suspended vertically for 30 seconds, and then weighed again. The percentage of the product remaining on the panels was then calculated.


\textsuperscript{2} Association for the Advancement of Medical Instrumentation (AAMI). AAMI TIR30:2011: Compendium of Processes, Materials, Test Methods, and Acceptance Criteria for Cleaning Reusable Medical Devices, Section 5.2.2. AAMI, Arlington, VA; 2011.

Dispensing and Coverage properties

The dispensing and coverage patterns of a pretreatment product are indicative of the efficacy and ease of use of the product. In order to adequately pretreat soiled instrumentation, a product needs to provide thorough coverage in an efficient manner. The product also needs to have controlled application that does not splash off the surface to which it is applied. Such splashing can carry soil off instruments onto surrounding surfaces or into the air.

PRE-KLENZ Point of Use Processing Gel dispensed easily with a one-touch button actuator and quickly provided broad, thorough, uniform coverage to the area in which it was applied. This can be seen in Figure 1, where PRE-KLENZ Point of Use Processing Gel covered and wetted the circle to the point of wrinkling the surface. Comparatively, other commercially available pretreatment products utilize traditional trigger-sprayers that dispense product in ways that produce splattering or that make it difficult to ensure soiled instruments are properly covered with product in an efficient manner. Although the coverage area of OptiPro™ Gel4 Instrument Pre-Cleaner was broad, the coverage itself was uneven, leaving pockets of only light to essentially no treatment throughout the sprayed area. Both Prepzyme® Multi-Tiered™ Enzymatic Foam Spray5 and Blu62™ Pretreatment Foam6 provided a limited, narrow area of coverage with each spray, which would make covering an entire tray of instruments quite inefficient and ergonomically more difficult. The EmPower Foam™7 sprayer propelled product out at erratic angles such that the majority of the product dispensed did not land where intended making adequate tray coverage extremely challenging, and creating a product exposure hazard. Renuzyme Foam Spray8 dispensed in a strong stream, leading to significant amounts of splashing that could propel soil out of the instrument tray being treated, thus creating a biohazard.
Cling properties

In order for a pretreatment product to initiate the cleaning process by loosening soil, it must remain on instruments for extended periods of time without running off. PRE-KLENZ Point of Use Processing Gel clings to soiled instruments, remaining on the surfaces longer than many other commercially available pretreatment products. Figure 2 demonstrates the amount of product remaining on the surface of a stainless steel panel after vertical suspension for 30 seconds. Approximately 80% of PRE-KLENZ Point of Use Processing Gel remained on the panel as compared to the competitive products, some of which maintained only around 10% of the initial application amount. Figure 3 depicts the superior cling of PRE-KLENZ Point of Use Processing Gel when compared to other pretreatment products.
Figure 2: Percentage of product remaining on a surface after 30 second vertical suspension
The controlled application of PRE-KLENZ Point of Use Processing Gel provided broad, uniform coverage versus other commercially available pretreatment products. Additionally, PRE-KLENZ Point of Use Processing Gel exhibited superior surface clinging ability, allowing for longer retention on soiled instrument surfaces.