

# ProEZ Gel™ Aerosol Spray Pre-Treatment Gel

## Pre-Cleaning Moisture Retention and Rinsibility



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# 1 Introduction

Instrument reprocessing is a crucial part of the daily functions of a hospital and the importance of keeping bodily soils loose and moist on the instruments is paramount in attaining a proper sanitation level post-cleaning. Extended periods of time in between surgeries can lead to hard to clean soils drying, highlighting the importance of pre-treatment products. Pre-treatment gels are used on instruments to begin the cleaning portion of reprocessing immediately following an operation.

Pre-treatment spray is the preferred method to maintain moisture on soiled instruments post surgery. This prevents corrosive blood soils from drying which protects instruments and makes cleaning and rinsing more effective. Jointed instruments are particularly vulnerable as they contain surfaces which are difficult to clean under normal circumstances, thus wetness becomes a more crucial element in the rinsing process.

Instrument reprocessing delays can last up to 72 hours, therefore, products should maintain moisture during this entire process. Products that dry or leave a sticky residue can make the instruments harder to clean (adding to the amount of time and effort spent cleaning the instruments).

# 2 Purpose

ProEZ Gel™ is a ready to use neutral pH pre-treatment gel applied at point-of-use to prevent soils from drying on instruments and devices used in healthcare. In addition to passive wetting action, ProEZ Gel™ features innovative biotechnology, using *Bacillus subtilis* to actively start soil breakdown. Three pre-treatment products - OptiPro® by Ecolab, PRE-Klenz® by Steris, and Prepzyme® Forever Wet by Ruhof - will be compared to ProEZ Gel™ using stainless steel coupons to determine their moisture retention and rinsibility properties.

# 3 Method

## a. Wetness

Identical stainless-steel coupons were prepared by weighing approximately 3.5 grams of each product into a petri dish. The petri dishes were left uncovered at room temperature for 72 hours before they were reweighed. The difference in weight is then calculated and used to determine the moisture retention percentage.

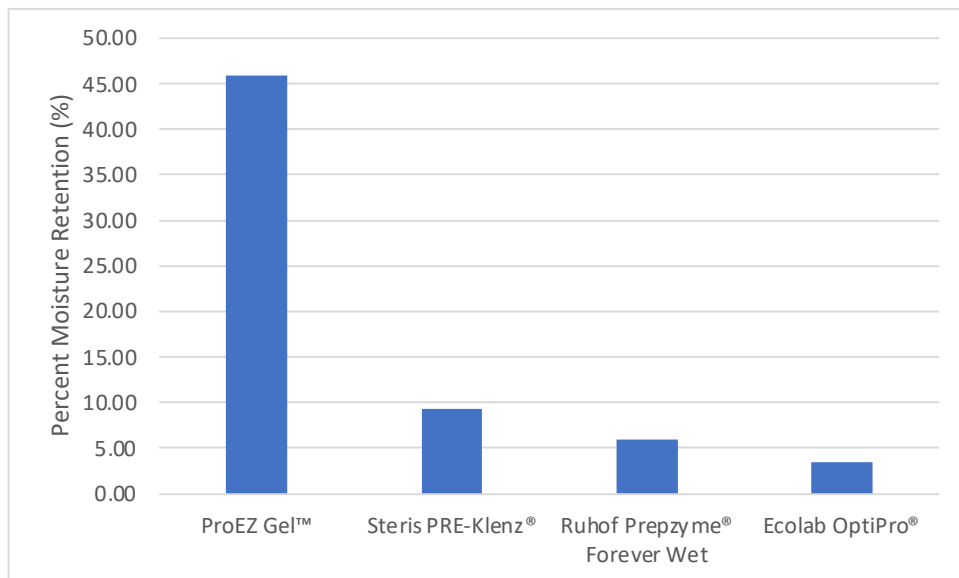
## b. Rinsibility

These same stainless-steel coupons are then weighed apart from the petri dish to determine the initial product amount. The coupons are then rinsed for 5 seconds with cold tap water with the valve maintained halfway open throughout the entire duration of the rinsing, air dried at room temperature, and reweighed to determine the rinsible percentage.

# 4 Results

## a. Wetness

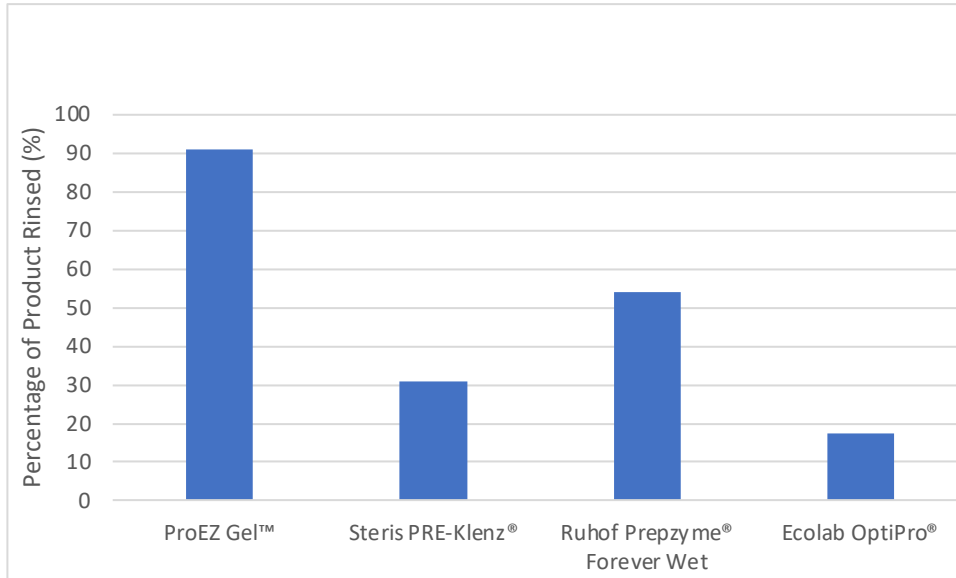
ProEZ Gel™ demonstrated excellent moisture retention. The amount of moisture retained from the ProEZ Gel™ was 45.92%, exceeding the wetness of competitor products by 4.95 times. This amount of moisture retention will allow ProEZ Gel™ to maintain instrument wetness for a longer period of time and ensure that no soils harden onto the surface.



**Fig. 1. Percent Moisture Retention over 72-hour Drying Period**

**b. Rinsibility**

ProEZ Gel™ also demonstrated excellent rinsing properties. The percent of product removed by rinsing exceeded 90% for ProEZ Gel™, 1.67 times the amount rinsed from competitive products. Due to the amount of moisture retained by ProEZ Gel™, the product rinses away freely to ensure that minimal product or soils are left behind on the instrument compared to competitor products reviewed.



**Fig. 2. Product Rinsible Percentage**

**5 Conclusion**

The test results demonstrate the moisture retention and rinsibility properties of ProEZ Gel™ and how it performs against competitive products under the same conditions. This data mimics the use of pre-treatment products in a healthcare sterile processing environment. ProEZ Gel™ vastly outperforms its competitors by offering a slower-drying, easier rinsing product.

