

XEN

Chemistries
for the ultimate
peace of mind

Xcelerate

Characteristics of XEN Pretreatment Foam

Protein Removal

XEN Xcelerate is a non-enzymatic surfactant based formulation. An internal study¹ was performed on the base formulation of XEN Xcelerate, comparing it to five market-leading commercially available enzyme-containing pretreatment products. Protein soil containing bovine serum albumen (BSA) and fibrinogen were applied to stainless-steel plates or surgical instruments. Various drying procedures and cleaning processes were used to simulate instrument use and reprocessing. The residual protein levels (that remained upon surfaces after cleaning) were measured using fluorescent protein detection, which uses an OPA based reagent that causes a fluorescence reaction.

The study demonstrated that all pretreatment products improved the protein removal during reprocessing. However, the non-enzymatic (XEN) base formulation was the most effective across the board, independent of protein drying time. Despite being enzyme-free, XEN Xcelerate showcases excellent performance demonstrating that enzymes are not essential for the effectiveness of this advanced formulation base.

Foaming Characteristics

XEN Xcelerate is delivered by foam to the surface via a manual trigger spray. Because of the foaming characteristic of the product, the operator can easily identify where they have sprayed and ensure good coverage of all instruments being treated. The foam breaks down quickly so that sharps are visible helping to avoid the risk of sharps injury due to poor visibility of instruments. (Fig. 1).



Figure 1



Foam immediately
after application



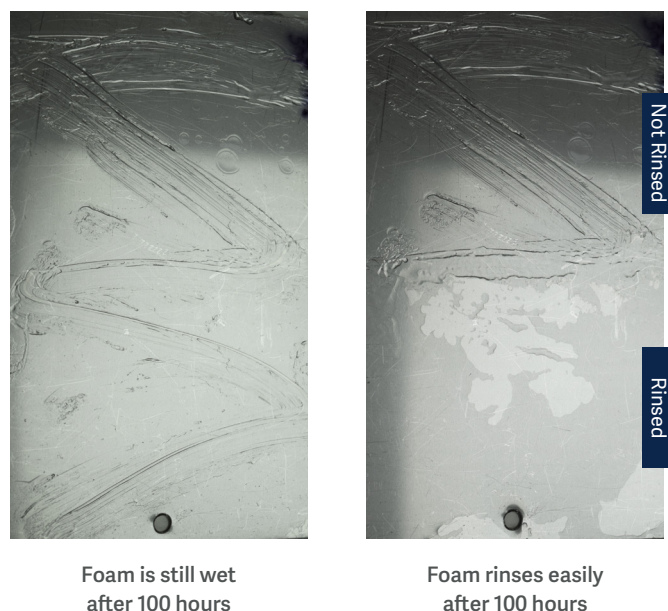
Foam 10 minutes
after application

Moisture Retention & Rinsability

The purpose of pretreatment products is to keep soils moist during transport from point-of-use to the processing area. XEN Xcelerate has been tested and demonstrated to remain moist for up to 100 hours in open air conditions². Pretreatment products reduce the adverse effects of soils drying prior to subsequent decontamination steps but are not intended to be used as a tool for leaving soiled instruments unprocessed for prolonged periods of time.

Testing to confirm the moisture retention characteristics of XEN Xcelerate was performed over 100-hours using stainless-steel panels sprayed with pretreatment products. After 100 hours in open-air conditions (at ambient temperature), the coating of product remaining on the surfaces was still wet and able to be moved around when touched. The image below shows the pretreatment in a zigzag pattern after 100 hours. The remaining pretreatment product was then tested for ease of rinsing by rinsing off half of the test panel under running water for 5 seconds at 20°C (68°F). The product was readily rinsed away. (Fig. 2).

Figure 2



Foam is still wet
after 100 hours

Foam rinses easily
after 100 hours

Summary of Findings

Overall, the data demonstrates that XEN Xcelerate combines effective protein soil management with practical handling characteristics that support instrument pretreatment workflows. The formulation consistently supported strong protein removal performance across varying drying conditions, including in comparison with enzyme-containing alternatives, demonstrating that effective pretreatment can be achieved without enzymatic components. In addition, the foaming delivery format supports clear visual coverage during application while dissipating quickly to maintain visibility of instruments and sharps. The moisture retention and rinsability testing further confirmed the product's ability to keep soils moist during transport and prior to reprocessing, while still allowing easy removal during subsequent cleaning steps.

Collectively, these findings position XEN Xcelerate as a valuable pretreatment option focused on maintaining soil manageability, supporting reprocessing efficiency, and promoting practical usability within clinical environments.

¹ Data on file: Arena FILE-005382

² It is not recommended per AAMI standard or professional society guidelines to leave soiled instruments sit without reprocessing for extended periods of time. Best practice is to reprocess soiled instruments as soon as possible after use. Local and national standards and guidelines should always be followed.