XEN
Chemistries
for the ultimate
peace of mind

Ophthalmic Instrument Cleaning

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As with all surgical instruments, ophthalmic instruments must be thoroughly processed to ensure cleanliness and patient safety. However, unlike general surgical tools, the use of enzyme-based cleaning chemistries is not recommended for ophthalmic instruments.

Due to the small volume and sensitivity of the eye, even minute traces of chemical or microbial contaminants can lead to serious complications such as postoperative infectious endophthalmitis and Toxic Anterior Segment Syndrome (TASS) [1].

TASS is an acute inflammatory response caused by contaminants introduced into the anterior chamber during intraocular surgery [1]. A major outbreak in 2006 prompted the formation of the ASCRS TASS Task Force, which identified improper instrument cleaning and sterilization as the most frequent root cause of TASS [2,3]. Risk factors include:

- Inadequate flushing and rinsing of handpieces
- Use of enzymatic detergents
- Use of ultrasonic baths [3]

Research has shown that enzymatic detergents can be toxic to the corneal endothelium in both animal and human studies [5,6]. The Ophthalmic Instrument Cleaning and Sterilization (OICS) Task Force advises against the routine use of enzymatic detergents for intraocular instruments [4]. Even when manufacturer's IFUs are followed, residual enzyme traces may still cause TASS.

XEN Neutral, Neutral+, and XEN Xcelerate pretreatment foam are formulated for use with ophthalmic instruments in mind. They do not contain enzymes and feature an advanced surfactant system designed to deliver effective cleaning performance without the risks associated with enzyme residues in eye surgery.

XEN Non-Enzymatic Cleaning Chemistries

XEN Neutral
XEN Neutral+
XEN Xcelerate

Conclusion

Cleaning ophthalmic instruments requires special care due to the eye's sensitivity to even tiny amounts of chemical residue. Enzymatic detergents have been linked to adverse reactions such as TASS and are not recommended for intraocular instruments [4,5,6]. XEN's non-enzymatic Cleaning Chemistries are formulated without enzymes and with effective surfactants, offer a safe and effective solution for pretreatment and/or cleaning ophthalmic instruments while minimizing the risk of patient complications. Following proper cleaning protocols and using appropriate products is essential to protect patient safety and surgical outcomes.

References

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