Kill Microorganisms on Instruments Safely, Efficiently, and Cost Effectively with 3M™ Steri-Vac™ Sterilizer/Aerator GS Series

Ideal for reprocessing long-lumen, flexible endoscopes

Recent CRE[1] outbreaks traced to inadequately processed duodenoscopes have highlighted the need for health care facilities to review cleaning and sterilization processes. In the case of a facility in northeastern Illinois, after the hospital changed its reprocessing procedure from automated high-level disinfection to ethylene oxide sterilization, no additional cases of CRE transmission were identified.[2] Ethylene Oxide (EO) sterilization provides an overkill sterilization process which means that there is a large safety margin built in to the cycle.

For facilities looking for effective reprocessing methods for heat- and moisture-sensitive equipment, the new 3M™ Steri-Vac™ Sterilizer/Aerator GS Series may be the solution. Instruments made of sensitive materials require sterilization solutions that are both budget-friendly and effective at killing microorganisms; sterile processing managers require solutions to help them effectively manage the increasing complexity of instrument reprocessing.

The 100 percent Ethylene Oxide (EO) sterilant used in the Steri-Vac sterilizer GS series effectively penetrates the complex geometries of instruments, such as long-lumen flexible endoscopes; many instruments that require low temperature sterilization can be sterilized using EO (always refer to the instrument manufacturers' Instructions for Use (IFU) for validated sterilization modalities and cycles). EO is gentle on materials, which may extend the life of instruments or reduce the frequency or cost of repairs. EO has been safely used in the health care industry for more than 50 years, and EO has also been used in medical device, government, and other industries for decades. In fact, over half of all sterilized single-use medical products are sterilized with ethylene oxide, according to the Global Industry Analysts.[3]

The Steri-Vac sterilizer GS series is designed for staff safety. 3M™ Steri-Gas™ Cartridges, single-use EO gas cartridges, are punctured only when the sterilizer chamber door is sealed and the proper vacuum has been drawn, ensuring that gas stays safely inside the chamber. The entire sterilization cycle proceeds under vacuum (below atmospheric pressure) and minimum aeration is pre-programmed in each cycle. The GS series sterilizers also offer a color touch screen on the front panel that displays key information, making it easy for the operator to monitor the cycle.

As the gold standard for low temperature sterilization, EO is a reliable solution to sterilize even the most challenging devices. While there will always be a need for multiple types of sterilization processes, EO may be preferable to Hydrogen Peroxide (H_2O_2) when instruments are sensitive to oxidizing agents. EO is highly effective and lower in cost than leading H_2O_2 systems,[4] comes with no restrictions on the length or inner diameter of endoscope channels, and has excellent materials compatibility. H_2O_2 is a strong oxidizer and can result in damage to instruments.

"Patient protection is the ultimate goal of all sterilization processes, and the Steri-Vac sterilizer GS series gives facilities an effective tool for low temperature sterilization," said Tushar Kshirsagar, global business director, 3M. "Facilities are choosing ethylene oxide sterilization over high-level disinfection for high-risk instruments to raise the standard of care. As noted by the Association for the Advancement of Medical Instrumentation (AAMI) and the U.S. Food and Drug Administration (FDA), 'Disinfection processes do not ensure the margin of safety associated with sterilization processes.'[5,6]"

3M also provides the elements of a strong sterilization quality control system utilizing biological, chemical, and physical monitors for every cycle.

To monitor cleaning efficacy prior to sterilization, particularly for difficult to clean flexible endoscopes, sterile processing managers may establish a quality control protocol using the 3M™ Clean-Trace™ ATP Cleaning Monitoring System. The Clean-Trace system provides a quantitative measure of contamination at established test points to help facilities verify cleaning efficacy. Considering recent information on the increased risk for endoscopy-associated infection, it is important to implement a routine monitoring program that detects reprocessing errors and monitors levels of endoscope contamination. A robust monitoring program supports and promotes proper endoscope reprocessing while verifying effectiveness thus supporting increased patient safety.

For more information about the 3M™ Steri-Vac™ Sterilizer/Aerator GS Series, visit go.3M.com/lowtemp. For more information about the 3M™ Clean-Trace™ ATP Cleaning Monitoring System, visit go.3M.com/ATPmonitoring.

About 3M

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[1] CRE: carbapenem-resistant Enterobacteriaceae

[2] Epstein L, Hunter JC, Arwady M, et al. New Delhi Metallo-β-Lactamase–Producing Carbapenem-Resistant Escherichia coli Associated With Exposure to Duodenoscopes. JAMA. 2014;312(14):1447-1455.

[3] Global Industry Analysts. Sterilization Equipment and Supplies. A Global Strategic Business Report. MCP-3362. October 2011.

[4] Based on cost comparison of 3M™ Steri-Vac™ Sterilizer/Aerator GS Series with ASP® STERRAD® 100NX® System and Steris V-PROTM 1 Low Temperature Sterilization System. Conducted 6/2014, verified 2/2015. 3M data on file.

[5] *Chemical sterilization and high-level disinfection in health care facilities*. ANSI/AAMI ST58; 2013.

[6] *Content and Format of Premarket Notification [501(k)]Submissions for Liquid Chemical Sterilants/High LevelDisinfectants*. U.S Department of Health and Human Services; Food and Drug Administration. January 3, 2000.

Photos/Multimedia Gallery Available: http://www.businesswire.com/multimedia/home/20150504005428/en/

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