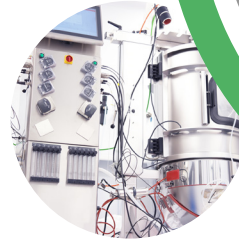
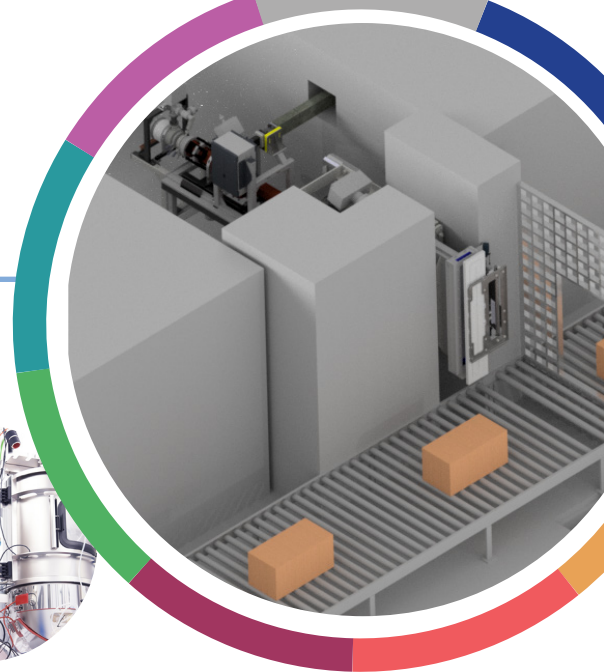


Mevex Equipment for Bioprocessing



Background

Linear accelerators (linacs) are used to process single-use bioprocessing components due to their ability to deliver precise doses of ionizing radiation while maintaining material integrity. The sterilization process involves exposing the product to high-energy X-rays generated by the linac, which effectively disrupts the DNA of microorganisms, rendering them unable to reproduce and causing their death.

Several factors drive the use of linacs for treating bioprocessing components. First, they provide a controlled and reproducible method for achieving the required sterilization dose, ensuring consistency across batches. Second, the electron beams generated by linacs can penetrate packaging materials, allowing for the sterilization of devices without compromising their integrity or functionality. Finally, linacs offer the advantage of reduced chemical residues and minimal impact on heat-sensitive materials.

Linac sterilization in single-use bioprocessing components

Linac sterilization is vital for single-use bioprocessing components for several key reasons:

- **Processing assurance:** Single-use components often come into direct contact with sensitive biological materials. Linac systems are utilized to effectively process components and reduce or eliminate contaminants that could compromise product safety and efficacy.
- **Material integrity:** Linac sterilization uses precise doses of ionizing radiation tailored to protect the integrity of bioprocessing components. This is crucial for maintaining the functionality of disposable systems like bioreactors and tubing.
- **Regulatory compliance:** The biopharmaceutical industry is subject to stringent regulatory standards. Linac sterilization helps manufacturers meet these requirements, processing all components before use, enhancing overall product quality and safety.

- **Efficiency and cost-effectiveness:** By streamlining the sterilization process, linacs can reduce turnaround times for single-use components, enabling faster production cycles. This efficiency helps lower operational costs while maintaining high standards of sterility.
- **Innovation and flexibility:** As biopharmaceutical processes evolve, reliably processing complex single-use systems allows for greater flexibility and innovation in product development, supporting the rapid introduction of new therapies and treatments.

FOR MORE INFORMATION

STERIS Applied Sterilization Technologies

Web: steris-ast.com
Email: ast_info@steris.com
(EMEA-APAC) +44 330 236 8344
(Americas) 877.783.7479

