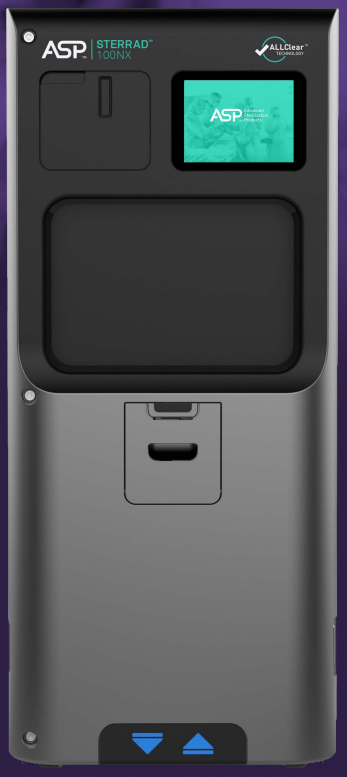
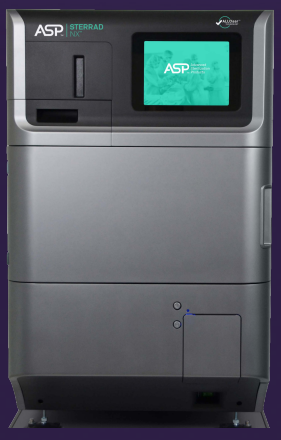
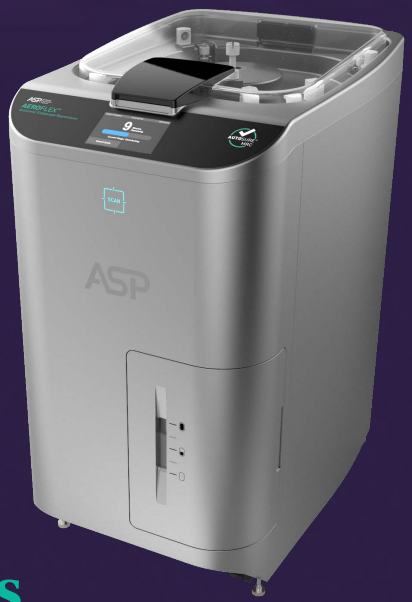
ASP Advanced Sterilization Products

Disinfection vs Sterilization: Know your Options





This is Low-Temperature Sterilization



This is Automated High-Level Disinfection

ASP Advanced Sterilization Products

Disinfection and Sterilization – What's the Difference?[1]

Sterilization

A process that destroys or eliminates all forms of microbial life

Disinfection

High-Level Disinfection (HLD) refers to the treatment of medical devices and dental instruments to inhibit most viable microorganisms, with the exception of some spores and prions when present in a significant load.

High-level disinfection is not sterilization.

Organism	Reprocessing Modality: Sterilization	Reprocessing Modality: High-Level Disinfection (HLD)
Bacterial Spores	✓	X
Mycobacteria	✓	✓
Fungi	✓	✓
Vegetative Bacteria	✓	✓
Enveloped Viruses	✓	✓

Why Sterilization For Semi-Critical Devices[2]

For over thirty years, many infection control professionals have relied on the Spaulding Classification of critical and semi-critical instruments to determine the reprocessing modality.

Classification	Examples
Critical	Surgical instruments, ultrasound probes used in sterile body cavity
Semi-Critical	Laryngoscopes and some endoscopes used in GI procedures

Times are changing.

Key organizations such as AAMI and AORN are calling for a shift to sterilization.

AAMI TIR68: 2018 3.4[3]

"Semi-critical devices are devices that contact intact mucous membranes or non-intact skin. Users should be instructed to thoroughly clean these devices and then **reprocess them by sterilization.** If the device design does not permit sterilization (e.g., device materials cannot withstand sterilization), then high-level disinfection should be used."

AORN Recommendation[4]

"Items that are classified as semi-critical, such as endoscopes, **should be sterilized whenever possible** and undergo HLD at a minimum if sterilization is not possible."

Evaluating the Appropriate Reprocessing Modality

Reusable Instruments

Critical or Semi-Critical Instrument?

Critical

Proceed to Sterilization

ASP SOLUTIONS

- STERRAD NX™ System
- STERRAD™ 100NX System

Semi-Critical

Does the device design permit sterilization?

Yes

Proceed to High Level Disinfection in an Advanced AER*

ASP SOLUTIONS

- ASP AEROFLEX™ Automatic Endoscope Reprocessor (AER)*

No

Proceed to manual High Level Disinfection**

ASP SOLUTIONS

- CIDEX™ OPA ortho-Phthalaldehyde Solution
- CIDEZYME™ Enzymatic Detergent Solution
- CIDEZYME™ XTRA Multi Enzymatic Detergent

> “Semicritical items represent the greatest risk of disease transmission because far more health care-associated infections have been caused by reusable semicritical items than critical or non-critical items.”[5]
>
> - William A. Rutala, PhD, MPH, CIC

*ASP AEROFLEX™ AER may not be registered in your market. Please contact your local ASP representatives for more information.
** Per your health care facility policy.

STERRAD™ Systems can sterilize a wide-range of instruments

ANESTHESIA
Flexible Difficult Intubation Scopes*
Laryngoscope Blades/Handles

CARDIAC
Defibrillator Paddles
Doppler Pencils and Cords
Power Equipment (sternal saw)

ENT/ RESPIRATORY
Bronchoscopes*
Cameras and Light Cords
Esophageal Dilators
Laryngoscopes
Powered Batteries
Powered Equipment
Telescopes
Tooth Guards
Video Cameras and Couplers

GENERAL
Bipolar Forceps
Cameras and Light Cords
Harmonic® Scalpel Hand Piece
Laparoscopic Instruments
Probes
Sonicision® Battery and Generator

GYNECOLOGY
Cameras and Light Cords
Rigid Endoscopes

NEUROLOGY
Bipolar Electrocautery Instruments
Doppler Pencils and Cords
Powered Batteries
Powered Equipment

OPTHALMOLOGY
Cornea Protectors
Ophthalmic Lenses

ORTHOPEDICS
Arthroscopes
Bipolar Cords and Forceps
Cameras and Light Cords
Curettes
Power Batteries
Powered Equipment
Pneumatic Saws and Drills

ROBOTICS
Da Vinci 3DHD Endoscopes

UROLOGY
Cameras and Light Cords
Electrodes
Flexible Endoscopes (Cystoscopes, Ureteroscopes etc.)*
Fiberoptic Light Source Cable
Telescopes
Ultrasound Probes and Transducers

*Flexible endoscopes can also be high-level disinfected in an automated AER/ECR.

For a list of model numbers that can be sterilized in STERRAD™ Systems, please visit the STERRAD™ Sterility Guide at **www.sterradsterilityguide.com**.

References

1. Centers for Disease Control and Prevention (CDC). Introduction, Methods, Definition of Terms -Guideline for Disinfection and Sterilization in Healthcare Facilities (2008) https://www.cdc.gov/infectioncontrol/guidelines/disinfection/introduction.html.

2. Centers for Disease Control and Prevention (CDC). A Rational Approach to Disinfection and Sterilization - Guideline for Disinfection and Sterilization in Healthcare Facilities (2008). https://www.cdc.gov/infectioncontrol/guidelines/disinfection/rational-approach.html.

3. American National Standard/Association for the Advancement of Medical Instrumentation. ANSI/AAMI TIR68:2018 Low and intermediate-level disinfection in healthcare settings for medical devices and patient care equipment and sterile processing environmental surfaces.

4. Association of periOperative Registered Nurses (AORN). 6 Dos and Don'ts for Sterile Processing in ASCs. September 25, 2019. https://www.aorn.org/about-aorn/aorn-newsroom/periop-today-newsletter/2019/2019-articles/sterile-processing-in-ascs

5. Rutala W.A., Weber D.J. 2016. Reprocessing semi critical items: Current issues and new technologies. Am J Infect Control, 44 e53-62.