

Device Cleaning FAQ

BD Alaris™ System

This document aggregates frequently asked questions regarding the cleaning guidelines for the BD Alaris™ System and is intended to supplement the following BD Alaris™ System resources:

- Maintenance section of the BD Alaris System with Guardrails™ User Manual
 - o v9.33 BD Alaris™ System with Guardrails™ User Manual
 - o <u>v12.1.0 BD Alaris™ System with Guardrails™ User Manual</u>
- Best Practices for Cleaning the Alaris™ System
- <u>Cleaning Product Guidelines for the Alaris™ System</u>
- Video: Proper cleaning techniques for Alaris™ System pumps

Cleaning products

1. Which approved cleaning products for the Alaris™ System are also disinfectants against SARS-CoV-2, the cause of COVID-19?

The United States Environmental Protection Agency (EPA) published a list of products that meet their criteria for use against SARS-CoV-2, the cause of COVID-19. The following products from the EPA list are also approved cleaners listed in the Cleaning Product Guidelines for the Alaris™ System:

- 10% bleach (sodium hypochlorite, one-part bleach to nine parts water).
- Clorox Healthcare® Bleach Germicidal Wipes
- PDI® Super Sani-Cloth® germicidal disposable wipes (purple-top)
- Wexford Labs Wex-Cide 128 concentrate germicidal detergent

For more information on COVID-19 disinfectants, please refer to:

- EPA List N: Disinfectants for Use Against SARS-CoV-2
- CDC's Cleaning and Disinfection Recommendations for COVID-19
- 2. Can we use a cleaning product that is not listed on the Cleaning Product Guidelines for the Alaris™ System?

Products not listed on the Cleaning Product Guidelines for the Alaris™ System have not been tested for use on Alaris™ System devices; therefore, we are unable to verify those cleaning products will not damage the materials of the Alaris™ System. BD recommends only using cleaning products listed on the approved Cleaning Product Guidelines for the Alaris™ System.

If a complete list of chemicals is not available for a cleaning product in question, BD recommends customers contact the manufacturer of that product directly to verify the cleaning product does not contain any of the chemicals listed in the *Do not use* list of the Cleaning Product Guidelines for the Alaris $^{\text{TM}}$ System. If your cleaner is not on the



approved list and the product does not contain any *Do not use* chemicals, then the warranty will be honored.

3. Can hydrogen peroxide-based cleaning products not listed on the approved Cleaning Product Guidelines for the Alaris™ System be used?

Hydrogen peroxide is not an approved cleaning solution. While hydrogen peroxide does not cause physical damage to the materials of the Alaris $^{\text{TM}}$ System, hydrogen peroxide-based cleaners are known to cause yellowing to the plastics of the devices. Cosmetic issues such as yellowing are not covered by warranty. If your cleaner is not on the approved list and the product does not contain any *Do not use* chemicals, then the warranty will be honored.

4. Can a cleaning product that contains a chemical listed in the *Do not use* section of the Cleaning Product Guidelines for the Alaris System be used?

No. The use of any cleaning product containing chemicals listed in the *Do not use* section of the Cleaning Product Guidelines for the Alaris™ System should be discontinued immediately to avoid damage to the Alaris System. Refer to the Cleaning Product Guidelines for the Alaris™ System and Best Practices for Cleaning Alaris™ System Devices for proper guidance.

5. Can the purple-top PDI Super Sani-Cloth® Germicidal Disposable Wipes be used to clean the Alaris System?

Yes. The purple-top PDI Super Sani-Cloth® Germicidal Disposable Wipes is an approved cleaning product listed in the Cleaning Product Guidelines for the Alaris™ System. Although the Super Sani-Cloth® Germicidal Disposable Wipes contain a formulation of quaternary ammonium chloride (aka, quats, a chemical listed in the *Do not use* section of the Cleaning Product Guidelines for the Alaris™ System), this specific cleaning product has been tested and deemed safe for use with the Alaris™ System.

6. Can the gray-top PDI Sani-Cloth® AF3 Germicidal Disposable Wipes be used to clean the Alaris™ System?

No. The gray-top PDI Sani-Cloth® AF3 Germicidal Disposable Wipes contain a chemical listed in the *Do not use* section of the Cleaning Product Guidelines for the Alaris $^{\text{TM}}$ System and is known to be harmful to the plastics of the devices. Use of this product should be discontinued immediately to avoid damage to the Alaris $^{\text{TM}}$ System.

Cleaning frequency and best practice

7. How would a heavily soiled pump be effectively cleaned?

The procedure for cleaning the Alaris System is defined in the Maintenance section of the BD Alaris System with Guardrails™ User Manual and outlined in the Best Practices for Cleaning the Alaris™ System guide. This procedure includes cleaning the case, inspection



and cleaning of the IUI connectors, and overall drying and inspection of the device. If the device or IUI cannot be cleaned following the cleaning procedure, the recommendation is to replace the device or IUI.

8. How often do the Alaris System devices need to be cleaned?

Customers establish and follow their own policies and procedures that define the situations and frequency for device cleaning procedures. The procedure for cleaning the Alaris System is defined in the Maintenance section of the BD Alaris System with Guardrails™ User Manual and outlined in the Best Practices for Cleaning the Alaris™ System guide.

9. How often do the IUI connectors need to be cleaned?

Customers establish and follow their own policies and procedures that define the situations and frequency for device cleaning procedures. The procedure for cleaning the Alaris System is defined in the Maintenance section of the BD Alaris System with Guardrails™ User Manual and outlined in the Best Practices for Cleaning the Alaris™ System guide.

10. Are there covers to protect IUI connectors during the cleaning procedure?

The Alaris System IUI Connector Covers listed in the table below are strongly recommended to protect the IUI connectors during the cleaning procedure of the Alaris™ System. To order these products, contact Customer Order Management at 800.482.4822 or custoareinfusion@bd.com. Directions for use of these IUI covers are found in the Alaris™ System IUI Connector Directions for Use.

Color	Location for use	Part number/Qty
Green	For all IUIs, except the PCA right-side IUI connector	49000418/10
Pink	Only for the PCA right-side IUI connector	49000419/5

11. How often do the soft-bristle brushes used to clean the IUI connectors need to be cleaned or replaced?

Per the manufacturer's guidance (Medisafe America), these brushes should be cleaned at the end of each cleaning shift or when heavily soiled. The brushes may be placed in standard washers/disinfectors for cleaning and disinfection, or manually cleaned of any visible soil by soaking for 15 minutes in a solution of household bleach (5.25% Sodium Hypochlorite) and water at a ratio of 1 part bleach to 10 parts water. These reusable brushes should be replaced after 25 uses, and discarded when signs of wear and tear are apparent (e.g. obvious bristle loss or bristle shortening). Please note, IUI connectors should not be exposed to any cleaning solution other than 70% IPA; therefore, if you are using a bleach solution to clean the IUI brushes, ensure brushes are completely dry before use to avoid damaging the IUI connectors.



12. Which tools can be used to clean the IUI connectors?

IUI connectors should not be cleaned with any tools other than the dedicated soft-bristle brush and 70% isopropyl alcohol. The use of alcohol pads to clean the IUI connectors is not recommended as these can cause residual fibers to be lodged within the IUI connectors. Possible outcomes of improperly maintaining IUI connectors include corrosion, power issues and communication failures.

Miscellaneous questions

13. Where should isopropyl alcohol be appropriately stored in the hospital?

Store and dispose isopropyl alcohol in accordance with federal, state, and local environmental control regulations.

14. Can the Alaris[™] System be exposed to UV light?

UV light has not been tested on the Alaris[™] System. Therefore, it is not recommended to expose the Alaris[™] System to UV light.

15. Is there a unique cleaning procedure for cleaning Alaris devices after exposure to Chemo/cytotoxic drugs?

No. The procedure for cleaning the Alaris System is defined in the Maintenance section of the BD Alaris System with Guardrails™ User Manual and outlined in the Best Practices for Cleaning the Alaris™ System guide. This procedure includes cleaning the case, inspection and cleaning of the IUI connectors, and overall drying and inspection of the device. If fluid ingress is suspected, we recommend your facilities' trained technicians perform a thorough inspection of the device to verify that there is no damage to the components due to fluid ingress. If there is fluid ingress on the components, either the damaged components or the entire device may need to be replaced.

Note: the Alaris System devices have an ingress protection rating of IPX2 (per the standard, vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle of 15° from its normal position).

16. Can Alaris™ System devices be stored in plastic bags to maintain cleanliness?

No. To prevent exposure to a humid environment that could cause damage to the device, BD does not recommend storing devices in plastic bags. Customers must confirm the devices and IUI connectors are thoroughly dry before use. Per the User Manual, DO NOT attach devices that have not fully dried to one another. "Wet mating" can hinder proper instrument operation.

17. What cleaning tools are available to clean the Alaris System?

The tools listed below are recommended for use during the cleaning procedure of the Alaris System. To order the cleaning tools listed below, contact Customer Order Management at 800.482.4822 or customerode com



Part	Part number
BD Alaris [™] System Cleaning Kit (Wipes, Brush, IUI Covers)	49000187
IUI Covers Green: for all IUIs except the PCA right-side IUI connector	49000418/10
Pink: only for the PCA right-side IUI connector	49000419/5
IUI Brushes	49000052
Case brushes	49000053

18. Where can I find additional sources of information on cleaning the Alaris™ System?

All available cleaning resources are available online at www.bd.com/alarissystemcleaning
For additional questions, email AlarisSystemCleaning@bd.com