Cleaning, Disinfecting, and Sterilization

# Monitors, Modules, Cables, and Printers

## Cleaning/Disinfecting Recommendations: updated June 2016

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|  | * *Use only recommended cleaning solutions, or you may void the manufacturer’s warranty.* * *Harsh chemical agents degrade plastics and will compromise the safety of the device. Some germicidal and other harsh cleaning compounds are known to damage some plastics by weakening the structural integrity and compromising the electrical insulating properties.* * *Disconnect the equipment from the patient and the electrical supply before cleaning.* * *Do not allow liquid to enter the interior of the module or monitoring equipment.* * *Do not immerse the equipment or cables in water or cleaning solutions.* * *Do not autoclave.* * *Accelerated Hydrogen Peroxide (AHP) and quaternary ammonia-based products ARE NOT RECOMMENDED for cleaning monitors and cables. These chemicals degrade plastics used in patient monitors and cables, and can cause serious safety hazards as the electrical insulating properties and structural integrity of the equipment break down.* * *Cavicide, Virex, Virex 256, PDI Sani‑Cloth Bleach Plus, Super Sani‑Cloth, and Sani‑Cloth AF3 are common quaternary ammonia germicidal products. The manufacturers of these solutions advertise that these germicidal products are safe for use on hard, non-porous surfaces, such as linoleum floors, formica countertops, and stainless steel. The manufacturers discourage the use of quaternary ammonia germicidal products on computer-grade plastics and on data, patient, and power cables, which are classified as porous materials.* |

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|  | * Use caution when cleaning cable connectors so that liquid is not permitted to collect around the electrical contacts or seep inside the connector. Trapped liquids and surface residues provide an unintentional electrical path, which may cause noisy signals and false alarms. * Questions and concerns about cleaning issues should be directed to a Spacelabs Healthcare field service engineer. |

To clean the exterior of monitors, modules, and cables

* Prepare the cleaning solution according to the manufacturer’s instructions.
* Wet a clean cloth with the selected cleaning solution.
* Remove excess liquid from the cloth and squeeze dry.
* Wipe exposed surfaces of the equipment and cables.
* Remove any soap residue by gently wiping with a clean damp cloth.
* Wipe dry with a clean dry cloth.

*After cleaning ECG lead wires, remove the ECG lead wires from the lead block and thoroughly dry them at the lead block ends and at the lead connector ends. Thorough drying will prevent residual moisture from providing a low-current path between leads, which can interfere with lead off detection and cause false asystoles.*

Use only the following recommended cleaning solutions:

* Mild soap and water solution
* U.S. Pharmacopoeia (USP) green soap
* Sodium hypochlorite solution (1:10 dilution of household chlorine bleach in water)
* Phenolic germicidal detergent (1% aqueous solution)
* Glutaraldehyde (2.4%) (Cidex)
* Isopropyl alcohol (70% solution)
* Diversey Oxivir wipes (benzyl alcohol 1 to 5% and hydrogen peroxide  
  0.5 to 2%)
* Clorox Healthcare wipes (benzyl alcohol 1 to 5% and hydrogen peroxide  
  0.5 to 2%)
* PDI Sani‑Cloth Bleach (sodium hypochlorite 0.63%)
* *Accelerated Hydrogen Peroxide (AHP) contains hydrogen peroxide and low concentrations of phosphoric acid. AHP is different from cleaners containing hydrogen peroxide mixed with alcohols and specifically NOT recommended for cleaning Spacelabs Healthcare products.*
* *Over time, repeated use of a chlorine bleach solution may cause some colors to fade.*

Tape adhesive can be removed with Spacelabs Healthcare adhesive tape remover pads (P/N 392196-001).