

Ultrasound System Cleaning And Disinfection

For COVID-19

Background of this document

This manual is provided as an emergency process in response to the outbreak of coronavirus disease 2019 (COVID-19).

The contents differ slightly from the existing manuals included with the Ultrasound system as this process is provided specifically for the current outbreak to simplify and clarify the process on site and prevent virus transmission.

Please refer to the websites below for more information.

World Health Organization (WHO)

- [Infection prevention and control during health care when novel coronavirus \(nCoV\) infection is suspected](#)

Centre for Disease Control (CDC) USA

- [Interim Guidance for Healthcare Facilities: Preparing for Community Transmission of COVID-19 in the United States](#)
- [Implement Environmental Infection Control](#)

Environmental Protection Agency (EPA) USA

- [List N: Disinfectants for Use Against SARS-CoV-2](#)

National Institute of Infectious Diseases, Japan

- [Infection control for COVID-19](#)

Canon cleaning, disinfection, and sterilization Manuals

- [Ultrasound System](#) (Select Model Name for system manual)
- [Ultrasound transducers and transducer accessories](#)

Work flow

Systems



1

Clean
with a
mild detergent

2

Disinfect
with
Sodium hypochlorite
(0.05 – 0.65%)

Transducers



1

Clean
with
cleaning solutions
(See guideline)

2

Disinfect
with
Sodium hypochlorite
(0.05 – 0.65%)

Note1: Sodium hypochlorite is low level disinfection. Use high-level disinfection for equipment that comes into contact with mucous membranes.

Note2: Ethanol (76.9 to 81.4 vol % at 15°C) or Isopropyl alcohol (70 vol %) can be used in place of sodium hypochlorite.

Note3: Refer to the manual for details.

System Maintenance

1 Cleaning

- ① Turn the system power OFF and disconnect the power cable plug from the power outlet.
- ② Wear single use Personal Protection Equipment (PPE) such as a Face Mask, Eye Protection, Apron and Gloves according to local guidelines. Dispose of PPE as instructed by local infection control directives.
- ③ Wipe the system using a soft cloth moistened with mild detergent.
- ④ Clean around the switches or keys on the main panel using cotton buds.
- ⑤ Wipe the transducer connector with a soft, dry cloth. For stubborn stains, use a soft cloth moistened with water.

2 Disinfection

Disinfection should be in compliance with the instructions of the infection control department

- ① Wear single use PPE such as a Face Mask, Eye Protection, Apron and Sterile Gloves according to local guidelines. Dispose of PPE as instructed by local infection control directives.
- ② Ensure that cleaning has been undertaken and the system is dry before performing disinfection.
- ③ Moisten a piece of soft cloth with Sodium hypochlorite (0.05 – 0.65%), squeeze it lightly, and wipe the surface of the unit. Be extremely careful not to allow the solution to enter the unit. Ethanol(76.9 to 81.4 vol% at 15° C) or Isopropyl alcohol(70 vol%) can be used in place of sodium hypochlorite.
- ④ After chemical disinfection, allow the surface of the system to dry fully. Do not heat the unit to dry it.
- ⑤ Confirm that the disinfected parts are not damaged or deformed.
- ⑥ After disinfecting the system, ventilate the room fully before turning ON the system.

Transducer Maintenance 1

1 Cleaning

Required : Personal Protection Equipment (PPE) such as a Face Mask, Eye Protection, Apron and Gloves, cleaning solution or cleaning wipes, purified water, clean soft cloth or gauze, non-abrasive single-use sponge

- ① Wear single use PPE according to local guidelines. Dispose of PPE as instructed by local infection control directives.
- ② Disassemble any accessories utilized (e.g., biopsy adaptor). Please refer to the transducer operation manual for further information
- ③ Wash off all organic materials (such as blood or other bodily fluids) from the transducer under purified water. A single-use sponge can be used for washing. Do not use a brush, as it may damage the transducer.
- ④ In accordance with the tables and figures in section 3 in the guideline manual, immerse the transducer in a cleaning solution or wipe the transducer using wipes to dissolve or remove any remaining organic materials. Use a single-use sponge if necessary. If dried organic materials are still present on the transducer, immerse it in the cleaning solution for a prolonged period.
- ⑤ Remove all residual organic materials and cleaning solution from the transducer by rinsing it under purified water. Confirm that all organic materials and cleaning solution have been completely removed. Do not reuse the purified water.
- ⑥ Dry the surface of the transducer using clean soft cloth or gauze. Do not use heat to dry the transducer.
- ⑦ Handle the cleaning solution or wipes as described in the documentation provided by the relevant manufacturer. To maintain the effectiveness of the cleaning solution or wipes, ensure that the concentration, temperature, and other conditions specified in the documentation provided by the manufacturer are met. To confirm the effectiveness of the cleaning solution or wipes, use the criteria (such as effective period, number of times of use, discoloration, and results of using the effectiveness test kit) described in the documentation provided by the manufacturer.
- ⑧ Confirm that the transducer shows no signs of damage, deformation, or peeling.

Transducer Maintenance 2

2 Disinfection

Before disinfection, the transducer must be cleaned and dried. Note that local regulations may require that the transducer be disinfected before sterilization.

Required : Personal Protection Equipment (PPE) such as a Face Mask, Eye Protection, Apron and Sterile Gloves, disinfectant, sterile water or deionized water, sterile soft cloth or gauze

- ① Wear single use PPE according to local guidelines. Dispose of PPE as instructed by local infection control directives.
- ② Disinfect the transducer using the chemicals listed in the Manual section 3 "List of Chemicals". The recommendation is to use Sodium hypochlorite (0.05 – 0.65%) by wiping for COVID-19. Ethanol(76.9 to 81.4 vol% at 15° C) or Isopropyl alcohol(70 vol%) can be used in place of sodium hypochlorite.
- ③ Rinse the transducer thoroughly with sterile or deionized water, as described in the documentation provided by the manufacturer, in order to remove all residual disinfectant. (Rinsing is not necessary when gas disinfection is performed using Trophon EPR or Trophon 2.) Do not reuse the sterile or deionized water.
- ④ Dry the surface of the transducer using sterile soft cloth or gauze. Do not use heat to dry the transducer.
- ⑤ Handle the disinfectant as described in the documentation provided by the relevant manufacturer. To maintain the effectiveness of the disinfectant, ensure that the concentration, temperature, and other conditions specified in the documentation provided by the manufacturer are met. To confirm the effectiveness of the disinfectant, use the criteria (such as effective period, number of times of use, discoloration, and results of using the effectiveness test kit) described in the documentation provided by the manufacturer.
- ⑥ Confirm that the transducer shows no signs of damage, deformation, or peeling.