

Safety Precautions

Safety Precautions

Please read the following precautions carefully to ensure the safety of the patient and the operator when using this transducer.

DANGER: DO NOT use flammable gasses, such as anesthetic gas or hydrogen, or flammable liquids such as ethanol, near the product, because there is danger of explosion.

- WARNING:**
1. Confirm that the transducer and cable are normal before and after each examination. A defective transducer may cause electric shock to the patient.
 2. Do not subject the transducer to shock. A defective transducer may cause electric shock to the patient.
 3. Do not disassemble the transducer to avoid the possibility of electric shock.
 4. Never immerse the transducer connector into liquids such as water or disinfectant because the connector is not waterproof. Immersion may cause electric shock or malfunction.
 5. The ultrasonic transducer is only for use with the specified ultrasonic diagnostic system. Please refer the ultrasonic diagnostic system operation manual to select the proper transducer.
 6. A transducer sheath must be installed over the transducer before performing examination.
 7. Do not use an aftermarket probe other than those specified by Mindray. The probes may damage the system causing a profound failure, e.g. a fire in the worst case.

- CAUTION:**
1. When using the transducer, wear sterile gloves to prevent infection.
 2. Be sure to use ultrasound gel. Please use the ultrasound gel compliant with the relevant local regulations.
 3. In normal diagnostic ultrasound mode, there is no danger of a low-temperature burn; however, keeping the transducer on the same region of the patient for a long time may cause such a burn.
 4. Do not use the carrying case for storing the transducer. If the carrying case is used for storage, it may become a source of infection.
 5. The transducer and accessories supplied with it are not delivered disinfected or sterilized. Sterilization (or high-level disinfect) before use is required.

6. It is required to practice ALARA when operating ultrasound system. Minimize the acoustic power without compromising the quality of images.
7. Disposable components are packaged sterile and are single-use only. Do not use if integrity of packaging violated or if expiration date has passed. Please use the disposable components compliant with the relevant local regulations.
8. Please use the disinfection or sterilization solution that recommended in this operator's manual, otherwise Mindray will not be liable for damage caused by other solutions. If you have any questions, please contact Mindray Customer Service Department or sales representative.
9. Do not use pre-lubricated condoms as a sheath. Lubricant may not be compatible with the transducer material and damage may result.
10. Transducer damage may be caused by inappropriate gel, detergent or cleanser: Do not soak or saturate transducers with solutions containing alcohol, bleach, ammonium chloride compounds, acetone or formaldehyde.
Avoid contact with solutions or coupling gels containing mineral oil or lanolin.

- NOTE:**
1. Read the following precautions to prevent the transducer from malfunction. Before connecting or disconnecting the transducer, freeze or turn off the ultrasonic diagnostic system.
Clean and disinfect the transducer before and after each examination.
 2. Ambient conditions:
To prevent the transducer from being damaged, do not use it where it will be exposed to:
direct sunlight or X-rays
sudden changes in temperature
dust
excessive vibration
heat generators

1 Inspection Before and After Use

Inspection before and after use must be performed as described below to ensure safe operation of the transducer.

If any abnormality is found, immediately stop using the transducer and contact MINDRAY Customer Service Department or sales representative.

1.1 Check the External Appearance of the Transducer

Confirm that there are no abnormalities of the transducer surface or cable sheath, such as peeling, cracks, protruding parts, or looseness of the acoustic lens, before and after each examination.

WARNING: Transducer abnormalities may cause electric shock or injury to the patient. If any abnormality is found, immediately stop using the transducer and contact your MINDRAY Customer Service Department or sales representative.

1.2 Cleaning the Transducer

Clean and disinfect the transducer before and after each examination.

CAUTION: If you don't clean and disinfect the transducer, it may become a source of infection.

1.3 Checking after Turning on the System

After turning ON the power of the ultrasonic diagnostic system, perform the following checks:

1. The acoustic lens of the transducer must not generate abnormal heat while it is being used. The transducer temperature should be checked by hand.

CAUTION: If you keep a hot acoustic lens on the body surface, the patient may be burned.

2. The image must not be abnormal while turning on the system.

CAUTION: Any of the problems mentioned above indicates that the ultrasonic diagnostic system or the transducer may be defective.

CAUTION:

1. Clean and disinfect the transducer before and after each examination.
2. When using the transducer, wear sterile gloves to prevent infection.

1.4 Utilizing the Transducer Cover

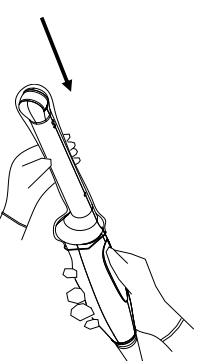
A legally marketed transducer sheath must be installed over the transducer before performing intra-cavitary examination. Protective barriers may be required to minimize disease transmission. Transducer covers are available for use with all clinical situations where infection is a concern.

CAUTION:

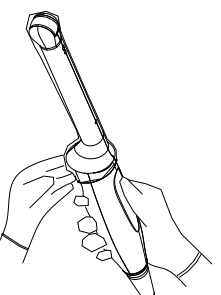
1. Be sure to cover the transducer with a new (unused) transducer sheath to prevent infection during examination. If the package of a transducer sheath is open or broken, the sterilization of the transducer sheath may not be sufficient. DO NOT use such a transducer sheath.
2. The cover contains natural rubber latex and talc that can cause allergic reactions in some individuals.
3. DO NOT use an expired transducer cover. Before using transducer sheaths, verify whether the term of validity has expired.

Method (for reference only):

1. Place an appropriate amount of gel inside the sheath or on the transducer acoustic lens. Poor imaging may result if no gel is used.
2. Insert the transducer into the sheath. Pull cover tightly over transducer acoustic lens to remove wrinkles and air bubbles, and taking care to avoid puncturing the sheath.



3. Secure the sheath with the enclosed elastic bands.
4. Inspect the sheath to ensure there are no holes or tears.



To order probe sheaths, contact:

Multi-Modality Imaging and Corporate Office:

Toll-free within the U.S. & Canada: 800.445.6741,

Toll-free Fax: 877.329.2482

Direct Dial: 319.248.6757 (International)

Fax: 319.248.6660; E-mail: order@ctvco.com; Website: www.ctvco.com

2 Cleaning and Disinfection

After completing each examination, clean and disinfect (or sterilize) the probes as required. When biopsy procedures have been performed, be sure to sterilize the needle-guided bracket. Fail to do so may result in the probe and the needle-guided bracket to becoming sources of infection. Please follow the instructions in the manual for cleaning.

WARNING: Never immerse the probe connector into liquid such as water or disinfectant. Immersion may cause electrical shock or malfunction.

CAUTION: 1. When performing cleaning and disinfection of the probe to prevent infection, wear sterile gloves.



2. After disinfection, rinse the probe thoroughly with sterile water to remove all chemical residues. Chemical residues on the probe may be harmful to the human body.
3. No cleaning and disinfecting may result in the probe becoming a source of infection.

NOTE:

1. After the examination, wipe off the ultrasound gel thoroughly. Otherwise, the ultrasound gel may solidify and degrade the image quality of the transducer.
2. DO NOT make the probe to become overheated (more than 55°C) during cleaning and disinfections. High temperature may cause the probe to become deformed or damaged.

2.1 Cleaning

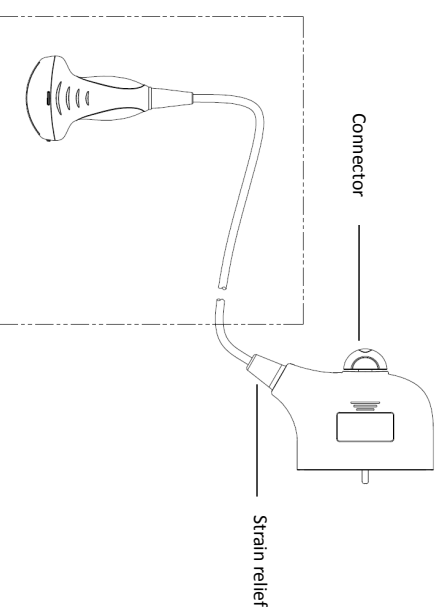
Please refer to the instructions in the manual and follow your hospital policy and procedures for cleaning.

1. Disconnect the probe from the system.
2. Wear sterile gloves to prevent infection.
3. Wash the transducer with clean water or soapy water to remove all the foreign matters, or wipe the transducer with a soft ethyl/carbamate sponge. Avoid using a brush, because it may damage the transducer.
4. Dry the transducer using a sterile cloth or gauze after rinsing. Do not dry the transducer by heating it.

2.2 Disinfecting with Sprays or Wipes

CAUTION: Use protective eyewear when disinfecting using sprays.

1. Wear sterile gloves to prevent infection.
2. After you have finished cleaning, spray or wipe the transducer with a disinfectant. Follow the disinfectant manufacturer's recommended contact time and mode.
3. Remove any residue with a water-moistened soft cloth on the transducer.
4. Wipe off water on the transducer using sterile cloth or gauze after washing.



NOTE: Observe the graph here carefully to perform disinfection. Do not spray the strain relief on the connector end or the connector.

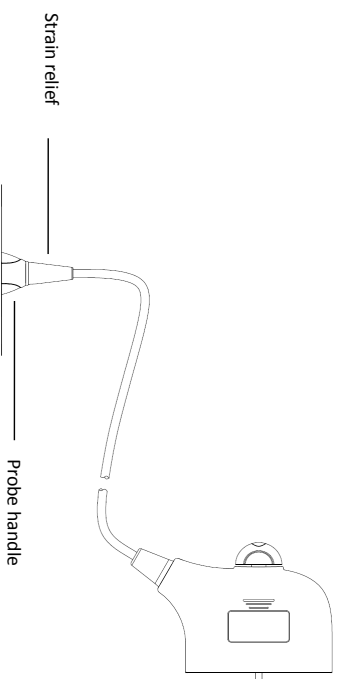
2.3 Disinfecting by Immersion

1. Wear sterile gloves to prevent infection.
2. Clean the transducer before disinfecting it. MINDRAY recommends the following solutions to disinfect the transducer.

Refer to the instructions provided by the chemical manufacturer concerning concentration of the disinfectant solution, method of disinfection and dilution and cautions during use. Do not soak the transducer connector or the cable near it into water or any solution.

Soak the transducer into the disinfectant solution for the shortest time the manufacturer recommends (for example, the shortest time recommended by the manufacturer for soaking Cidex OPA is 12 minutes). Follow local regulations when selecting and using the disinfectant.

3. Rinse the transducer with plenty of sterile water (about 2 gallons) for at least 1 minute to remove all chemical residues on it. Or, follow the rinsing method recommended by the disinfectant manufacturer to rinse the transducer.
4. Wipe off the water on the transducer with sterile cloth or gauze after rinsing it. Do not dry the transducer by heating.



NOTE:

1. Observe the graph here carefully to immerse the transducer. Only soak parts of the transducer below the strain relief.
2. Repeated disinfection will eventually damage the probe. please check the probe performance periodically.

2.4 Sterilization

For intra-operative transducers, they have to be sterilized after completing each examination.

1. Wear sterile gloves to prevent infection.
2. Clean the transducer before sterilizing it. MINDRAY recommends the following solutions to sterilize the transducer.

Hydrogen Peroxide and Peroxyacetic Acid -based sterilization solution

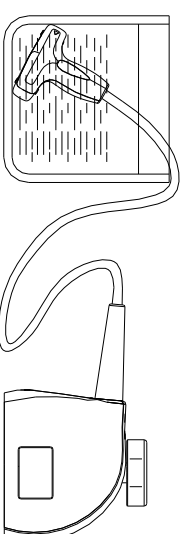
Trade Name	Chemical Name	Procedures
Minnicare® Cold Sterilant	22% Hydrogen Peroxide 4.5% Peroxyacetic Acid	Dilute the sterilant with sterilized purified water (1:20). Immersed time: 11 hours. Temperature: 20°C-25°C. Please refer to the instructions provided by the manufacturer of the solution for details.

Glutaraldehyde-based sterilization solution

Trade Name	Chemical Name	Procedures
Cidex Activated Glutaraldehyde Solution (applicable for CE region)	2.2-2.7% Glutaraldehyde	Soak the transducer into the activated solution for 10 hours (20-25°C). Please refer to the instructions provided by the manufacturer of the solution for details.

- Refer to the instructions provided by the chemical manufacturer concerning concentration of the sterilization solution, method of sterilization and dilution and cautions during use.
- Do not soak the transducer connector or the cable near it into water or any solution.
- Follow local regulations when selecting and using the sterilization solution.

3. Rinse the transducer with plenty of sterile water (about 2 gallons) for at least 1 minute to remove all chemical residues on it. Or, follow the rinsing method recommended by the sterilization solution manufacturer to rinse the transducer.
4. Wipe off the water on the transducer with sterile cloth or gauze after rinsing it. Do not dry the transducer by heating.



Immerse the intra-operative transducer in the solution (for reference)

Before safety and performance is affected, intra-operative probes can be sterilized by Cidex Activated Glutaraldehyde Solution for at least 217 times (10 hours for one time).

Before safety and performance is affected, intra-operative probes can be sterilized by Minnicare COLD STERILANT for at least 135 times (11 hours for one time).

Table 2 wipe disinfectants for linear probes

Probes	Disinfectants	CLEANISEPT® WIPES	mikrozid®AF Wipes Jumbo	mikrozid® Sensitive Wipes	PROTEX™DISINFECTANT Wipes	Sani-Cloth®Plus	SONO™ ULTRASOUND WIPES	Tristel Surface Wipes	Tristel Pre-Clean Wipes	Tristel Sporicidal Wipes	Tristel Rinse Wipes	UNIVERSAL WIPES	Wip'Anios premium	DI Water	Bleach 5.25%(10% solution)	Ethanol 75%	Sporox II	Ultrasound probe cleaning wipes	Sani-Cloth AF3	MetriSponge	Protex Ultra Wipes
L7-3/L7-3S/L7-3E		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
L9-3U/L9-3E/L9-3S		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						✓		
L10-3E/L10-3S		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
L11-3U		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
L11-4/L11-4s		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
L12-3/L12-3E		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
L12-4/L12-4s		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
L14-5W/L14-5WU		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
L14-6/L14-6S/L14-6P		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
L14-6N/L14-6NS/L14-6NP/L14-6NE		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
L14-6WE/L14-6WS/L14-6WU		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
L16-4HE/L16-4HS/L16-4HU		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
LM14-6E/LM14-6SL/M16-4U		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
L20-5U/L20-5L/20-5s		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
6LE7/6LE7S/6LE7P		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
6LE5V/6LE5V/6LE5VP		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
7L4/7L4S/7L4A/7L4P		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
7L7/7L7S/7L7L/7L7P		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
7L5/7L5P/7L5S		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
7L6/7L6s		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
10L4/10L4s		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
10L2EA		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
50L60EAV		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
65L50HAV		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
75L38EA/75L38EB/75L53EA/75L60EA/75L38P		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			
75L50EAV/75LT38EA		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓			

Table 4 wipe disinfectants for 4D probes

Probes	Disinfectants		
4CD4/4CD4A/4CD4s			
D7-2/D7-2E/D7-2s			
D6-2/D6-2P/D6-2A/D6-2E			
D6-2NE			
D8-2U			
D8-4U			
DE10-3			
DE10-3E/DE10-3U			
DE11-3U/DE11-3P			
/DE11-3s/DE11-3E			
	CLEANISEPT® WIPES		
	mikrozid®AF Wipes Jumbo		
	PROTEX™DISINFECTANT Wipes		
	Sani-Cloth®Plus		
	SONO™ ULTRASOUND WIPES		
	Tristel Surface Wipes		
	Tristel Pre-Clean Wipes		
	Tristel Sporidical Wipes		
	Tristel Rinse Wipes		
	UNIVERSAL WIPES		
	mikrozid®Sensitive Wipes		
	Wip'Anios premium		
	CaviWipes		
	CaviWipes 1		
	Tuffle 5		
	ultrasound probe cleaning wipes		
	Sani Cloth Active		

Table 1 spray disinfectants for convex probes

Probes	Disinfectants
C5-1s/C5-1E/C5-1U	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN <input checked="" type="checkbox"/> T-Spray
C5-2/C5-2s/C5-2E	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN
C6-2E/C6-2	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN
C6-2Gs/C6-2GE/C6-2GU	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN
C7-3E	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN
C11-3E/ C11-3s/C11-3U	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN
3C1/3C1s/3C1p	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN
3C5/3C5s/3C5A/3C5P	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN
6C2/6C2P/6C2s	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN
35C20EA/35C50EA/35C50EB/35C50P	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN
65C15EA//65C15EA	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN
SC5-1U/SC5-1E	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN
SC6-1U	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN
SC8-2U	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN <input checked="" type="checkbox"/> T-Spray
65EC10EA/65EC10EB/65EC10EC	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN
65EL60EA	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN
65EC10ED	<input checked="" type="checkbox"/> Oxivir ^{TM/MC} Tb <input checked="" type="checkbox"/> PI-SPRAY-II <input checked="" type="checkbox"/> Surfa'safe <input checked="" type="checkbox"/> TRANSEPTIC <input checked="" type="checkbox"/> PROTEX TM DISINFECTANT SPRAY <input checked="" type="checkbox"/> Tristel Solo <input checked="" type="checkbox"/> IODOCLEAN

Table 2 spray disinfectants for linear probes

Probes	Disinfectants							
		Oxivir™/MC Tb	PI-SPRAY-II	Surfa'safe	TRANSEPTIC	PROTEX™DISINFECTANT SPRAY	Tristel Solo	IODOCLEAN
L7-3/L7-3S/L7-3E		✓	✓	✓	✓	✓	✓	✓
L9-3U/L9-3E/L9-3S		✓	✓	✓		✓		✓
L10-3E/L10-3S						✓	✓	
L11-3U		✓	✓	✓				
L11-4/L11-4s		✓	✓	✓				
L12-3/L12-3E		✓	✓	✓		✓		✓
L12-4/L12-4s		✓	✓	✓		✓		✓
L14-6/L14-6s/L14-6P		✓	✓	✓				✓
L14-6N/L14-6Ns/L14-6NP/L14-6NE		✓	✓	✓		✓		✓
L14-6WE/L14-6Ws/L14-6WU		✓	✓	✓		✓		✓
L14-5W/L14-5WU			✓					
L16-4HE/L16-4HS/L16-4HU								✓
LM14-6E/LM14-6s/LM16-4U		✓	✓	✓	✓	✓	✓	✓
L20-5U/L20-5L20-5s			✓					
6LE7/6LE7s/6LE7P			✓		✓	✓	✓	
6LE5V/6LE5Vs/6LE5VP			✓		✓	✓	✓	
7L4/7L4s/7L4A/7L4P		✓	✓	✓	✓	✓	✓	✓
7L14/7L14s/7L14P			✓		✓	✓	✓	
7L5/7L5P/7L5s		✓	✓	✓	✓	✓	✓	✓
7L6/7L6s		✓	✓	✓	✓	✓	✓	✓
10L4/10L4s				✓				
10L24EA		✓	✓	✓				
50L60EAV			✓		✓	✓	✓	
65L50HAV			✓		✓	✓	✓	
75L38EA/75L38EB/75L53EA/75L60EA/75L38P		✓	✓	✓	✓	✓	✓	✓
75L50EAV/75LT38EA			✓		✓	✓	✓	

Table 3 spray disinfectants for other types of probes

Probes	Disinfectants	Oxivir™/MC Tb	PI-SPRAY-II	Surfa'safe	TRANSEPTIC	PROTEX™DISINFECTANT SPRAY	Tristel Solo	IODOCLEAN
				√	√	√	√	√
Phased	P4-2/P4-2s/P4-2E/P4-2NE/P4-2Ns	√	√	√	√	√	√	√
	P7-3/P7-3s/P7-3E/P7-3P/P7-3U	√	√	√	√	√	√	√
	P10-4E/P10-4s/P10-4U	√	√	√	√	√	√	√
	P12-4/P12-4s	√	√	√	√	√	√	√
	2P2/2P2s/2P2P	√	√	√	√	√	√	√
	SP5-1U/SP5-1s/SP5-1E	√	√	√	√	√	√	√
Endo-cavity	V11-3N/V11-3BE/V11-3B/V11-3WE/ V11-3WS/V11-3E	√	√	√	√	√	√	√
	V11-3HU/ V11-3HE/V11-3HS	√	√	√	√	√	√	√
	V10-4/10-4s/V10-4B/V10-4BS/V10-4BP/V10-4P	√	√	√	√	√	√	√
	6CV1/6CV1s/6CV1P	√	√	√	√	√	√	√
Pencil	CW2s/CW5s/CW5	√	√	√	√	√	√	√
	6SEEB10EA	√	√	√	√	√	√	√
Biplane	CB10-4/CB10-4P/CB10-4A/CB10-4E	√	√	√	√	√	√	√
	6LB7/6LB7s/6LB7P	√	√	√	√	√	√	√

Table 4 spray disinfectants for 4D probes

Probes	Disinfectants
4CD4/4CD4A/4CD4S	Oxivir™/MC Tb
D7-2/D7-2E/D7-2s	PI-SPRAY-II
D6-2/D6-2P/D6-2A/D6-2E	Surfa'safe
D6-2NE	TRANSEPTIC
D8-2U	PROTEX™DISINFECTANT SPRAY
D8-4U	Tristel Solo
DE10-3	CaviCide
DE10-3E/DE10-3U	T-Spray
DE11-3U/DE11-3P	
/DE11-3s/DE11-3E	

Table 1 solution disinfectants for convex probes

Probes \ Disinfectants															
C5-1s/C5-1E/C5-1U	CIDEX OPA	Cidex Activated Glutaraldehyde Solution	MetriZyme	MinnCare® Cold Sterilant	Ster-Bac	TroponSonex-HL※	Triacid-N	Revital-Ox™ Resert High Level Disinfectant	ggigasept®PAA concentrate	gigasept®FF(neu)	DESCOTON extra	ANIOXYDE 1000	SALVANIOS pH7	SALVANIOS pH10	CIDEX PLUS
C5-2/C5-2s/C5-2E	✓				✓		✓		✓	✓	✓	✓	✓	✓	
C6-2E/C6-2	✓				✓		✓		✓	✓	✓	✓	✓	✓	
C6-2Gs/C6-2GE/C6-2GU	✓								✓	✓	✓	✓	✓	✓	
C7-3E	✓				✓		✓		✓	✓	✓	✓	✓	✓	
C11-3E/ C11-3s/C11-3U	✓				✓		✓		✓	✓	✓	✓	✓	✓	
3C1/3C1s/3C1p	✓				✓		✓		✓	✓	✓	✓	✓	✓	
3C5/3C5s/3C5A/3C5P	✓				✓		✓		✓	✓	✓	✓	✓	✓	
6C2/6C2P/6C2s	✓				✓		✓		✓	✓	✓	✓	✓	✓	
35C20EA/35C50EA/35C50EB/35C50P	✓				✓		✓		✓	✓	✓	✓	✓	✓	
65C15EA/65C15EA	✓				✓		✓		✓	✓	✓	✓	✓	✓	
SC5-1U/SC5-1E	✓														
SC6-1U	✓				✓				✓				✓		
SC8-2U	✓									✓					✓
65EC10EA/65EC10EB/65EC10EC	✓				✓		✓		✓	✓	✓	✓	✓	✓	
65EL60EA	✓				✓		✓		✓	✓	✓	✓	✓	✓	
65EC10ED	✓				✓		✓		✓	✓	✓	✓	✓	✓	

※TroponSonex-HL (Used with Tropon EPR Ultrasound Probe Disinfectant)

Table 2 solution disinfectants for linear probes

Probes	Disinfectants	CIDEX OPA	Cidex Activated Glutaraldehyde Solution	MetriZyme	Minnicare® Cold Sterilant	Ster-Bac	TrophonSonex-HL※	Triacid-N	Revital-Ox™ Resert High Level Disinfectant	ggigasept®PAA concentrate	ANIOXYDE 1000	DESCOTON extra	gigasept®FF(neu)	SALVANIOS pH7	SALVANIOS pH10	Prolystica 2X Concentrate Enzymatic	Liquinox	Cidezime	Nu-Cidex	Alkazyme	Klnezyme	Steranios
L7-3/L7-3s/L7-3E		√	√	√	√	√	√	√	√	√	√	√	√	√	√							
L9-3U/L9-3E/L9-3s		√				√	√	√		√	√	√	√	√	√							
L10-3E/L10-3s				√			√	√		√	√	√	√	√	√							
L11-3U		√			√		√	√		√	√	√	√	√	√							
L11-4/L11-4s		√				√	√	√		√	√	√	√	√	√							
L12-3/L12-3E		√				√	√	√		√	√	√	√	√	√							
L12-4/L12-4s		√				√	√	√		√	√	√	√	√	√							
L14-6/L14-6s/L14-6P		√				√	√	√		√	√	√	√	√	√							
L14-6N/L14-6Ns/L14-6NP/L14-6NE		√				√	√	√		√	√	√	√	√	√							
L14-6WE/L14-6Ws/L14-6WU		√				√	√	√		√	√	√	√	√	√							
L14-5W/L14-5WU																√						
L16-4HE/L16-4Hs/L16-4HU		√	√				√	√									√					
LM14-6E/LM14-6s/LM16-4U		√	√	√		√	√	√		√	√	√	√	√	√							
L20-5U/L20-5L20-5s			√																			
6LE7/6LE7s/6LE7P		√	√	√	√	√	√	√														
6LESV/6LESVs/6LESVP		√	√	√	√	√	√	√														
7L4/7L4s/7L4A/7L4P		√	√	√	√	√	√	√														
7LT4/7LT4s/7LT4P		√	√	√	√	√	√	√														
7L5/7L5P/7L5s		√	√	√	√	√	√	√														
7L6/7L6s		√	√	√	√	√	√	√														
10L4/10L4s		√	√	√	√	√	√	√														
10L24EA		√				√				√												
50L60EA		√				√				√												
65L50HA		√				√				√												
75L38EA/75L38EB/75L53EA/75L60EA/75L38P		√	√	√	√	√	√	√		√	√	√	√	√	√							
75L50EA/75L138EA		√	√	√	√	√	√	√														

※TrophonSonex-HL (Used with Trophon EPR Ultrasound Probe Disinfectant)

Table 3 solution disinfectants for other types of probes

Probes	Disinfectants															
		CIDEX OPA	Cidex Activated Glutaraldehyde Solution	MetriZyme	Minnicare® Cold Sterilant	Ster-Bac	TrophonSonex-HL※	Triacid-N	Revital-Ox™ Resert High Level Disinfectant	ggigasept®PAA concentrate	DESCOTON extra	ANIOXYDE 1000	gigasept®FF(neu)	SALVANIOS pH7	SALVANIOS pH10	
Phased	P4-2/P4-2s/P4-2E/P4-2NE/P4-2Ns	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	P7-3/P7-3s/P7-3E/P7-3P/P7-3U															
	P10-4E/P10-4s/P10-4U	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	P12-4/P12-4s	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	2P2/2P2s/2P2P	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	SP5-1U/SP5-1s/SP5-1E	√														
	V11-3N/11-3BE/V11-3B/V11-3WE/	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	V11-3Ws/V11-3E															
	V11-3HU/ V11-3HE/V11-3HS	√			√											
	V10-4/10-4s/V10-4B/V10-4BS/V10-4BP/V10-4P	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Endo-cavity	6CV1/6CV1s/6CV1P	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	CW2s/CW5s/CW5	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	6SEB10EA	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
Pencil	CB10-4/CB10-4P/CB10-4A/CB10-4E	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	6LB7/6LB7s/6LB7P	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
Biplane	CB10-4/CB10-4P/CB10-4A/CB10-4E	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	6LB7/6LB7s/6LB7P	√	√	√	√	√	√	√	√	√	√	√	√	√	√	

※TrophonSonex-HL (Used with Trophon EPR Ultrasound Probe Disinfectant)

Table 4 solution disinfectants for 4D probes

Probes	Disinfectants		
	CIDEX OPA	✓	
	Cidex Activated Glutaraldehyde Solution	✓	✓
	MetriZyme	✓	✓
	MinnCare® Cold Sterilant	✓	✓
	Ster-Bac	✓	✓
	TrophonSonex-HL※	✓	✓
	Triacid-N	✓	✓
	Revital-Ox™ Resert High Level Disinfectant		
	ggigasept®PAA concentrate	✓	
	DESCOTON extra	✓	
	gigasept®FF(neu)	✓	
	Cidex	✓	✓
	Cidex Plus	✓	✓
	Gigasept AF	✓	
	Osvan		✓
	Neojodin		✓
	Milton		✓
	hibitane		✓
	Sterihyde		✓
	SALVANIOS pH7	✓	✓
	ANIOXYDE 1000	✓	✓
4CD4/4CD4A/4CD4s		✓	✓
D7-2/D7-2E/D7-2s		✓	✓
D6-2/D6-2P/D6-2A/D6-2E		✓	✓
D6-2NE		✓	
D8-2U		✓	
D8-4U			
DE10-3		✓	✓
DE10-3E/DE10-3U		✓	
DE11-3U/DE11-3P/DE11-3s/DE11-3E		✓	

※TrophonSonex-HL (Used with Trophon EPR Ultrasound Probe Disinfectant)

Table 5 gels and powder disinfectants for 4D probes

Disinfectants Probes	Gels			Powder	
	Aquasonics 100	Sonogel	Scan	Rely+On PeraSafe	PeraSafe
4CD4/4CD4A/4CD4s					
D7-2/D7-2E/D7-2s					
D6-2/D6-2P/D6-2A/D6-2E					
D6-2NE					
D8-2U	✓	✓	✓		✓
D8-4U	✓	✓	✓	✓	
DE10-3					
DE10-3E/DE10-3U	✓	✓	✓	✓	
DE11-3U/DE11-3P					
/DE11-3s/DE11-3E					

Active Ingredients of the Disinfectants:

<p>Tristel Surface Wipes/Tristel Trio Wipes System: chlorine dioxide</p>	<p>Wip'Anios premium: didecyldimethylammonium chloride 1.4mg/g, polyhexamethylene biguanide hydrochloride 0.96mg/g</p>	<p>Protex™ Disinfectant Spray/Protex™ Disinfectant Wipes: octyl decyl dimethyl ammonium chloride; dioctyl dimethyl ammonium chloride; didecyl dimethyl ammonium chloride; dimethyl benzyl ammonium chloride</p>			
<p>Ster-Bac/mikrozid® Sensitive Wipes/ UNIVERSAL WIPES: didecyldimethylammonium chloride 1.4mg/g, polyhexamethylene biguanide hydrochloride 0.96mg/g</p> <p>PL-SPRAY-II: Octyl decyl dimethyl ammonium chloride, Dioctyl dimethyl ammonium chloride, Didecyl dimethyl ammonium chloride, Benzalkonium chloride</p>	<p>Cidex Activated Glutaraldehyde Solution: glutaraldehyde</p> <p>TRANSEPTIC: isopropyl alcohol, chlorhexidine gluconate</p> <p>gigasept®FF(neu): 0.11g succinylaldehyde; 0.3g dimethoxytetrahydrofuran; < 5% anionic surfactant; non-ionic surfactants; anti-corrosion compounds; fragrance</p> <p>gigasept®PAA concentrate: peracetic acid (5%); hydrogen peroxide; acetic acid; potassium hydroxide; corrosion inhibitor</p>	<p>Triacid-N: N-Dodecylpropan-1,3-diamin; propan-2-ol; isotridecanol, ethoxylated; non-ionic detergent</p> <p>Surfa safe: didecyldimethylammonium chloride 1.4mg/g, polyhexamethylene biguanide hydrochloride 0.96mg/g</p> <p>Revital-Ox™ Resert High Level Disinfectant/TrophonSonex-HL: hydrogen peroxide</p>			
<p>MetriZyme/Cidezyme/Alkazyne/Kinezyme: Proteinase subtilisin</p> <p>Tristel Rinse Wipes: deionized water</p> <p>Cidex OPA: 0.55% Ortho-phthaldialdehyde</p> <p>Oxvir/™wmc Tb: 0.5% hydrogen peroxide</p> <p>Tristel Solo: polyhexamethylbiguanide</p> <p>Tristel Pre-Clean Wipes: enzymatic detergent</p> <p>Sani-Cloth® Plus: n-Alkyl dimethyl benzyl ammonium chloride n-Alkyl ethylbenzyl ammonium chloride</p> <p>SONO™ ULTRASOUND WIPES: octyl decyl dimethyl ammonium chloride; dioctyl dimethyl ammonium chloride; didecyl dimethyl ammonium chloride; dimethyl benzyl ammonium chloride</p> <p>Mimicare® Cold Sterilant: 22% Hydrogen Peroxide, 4.5% Peroxyacetic Acid</p> <p>mikrozid®AF Wipes Jumbo: 25% ethanol; 35% propan-1-ol</p> <p>CLEANISEPT™ WIPES: 0.25g didecyldimethylammoniumchloride 0.5g quaternary ammonium compounds , benzyl-C12-16-alkyldimethyl-, chlorides</p>	<p>Sani-Cloth AF3: Quaternary ammonium compounds, C12-18-alkyl [(ethyl)phenyl] methyl, dimethyl, chloridesk, Benzyl-C12-18-alkyldimethyl ammonium chlorides</p> <p>MetriSponge: Water and non-hazardous ingredients Mixture , Propylene glycol , Nontonic Surfactants Proprietary , Fragrance Oil Proprietary, Proteinase subtilisin, Octamethylcyclotetrasiloxane</p> <p>Protex Ultra Wipes: Quaternary ammonium compounds di-C8-10-alkyldimethyl, chlorides, Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides, Water, Proprietary Ingredients</p> <p>Prolystica 2X Concentrate Enzymatic: Alcohols, C12-14-secondary, ethoxylated, Subtilisins (proteolytic enzymes), Glycerine</p> <p>Liquinox: Sodium sulfonate, Tripotassium</p> <p>Steranos: 2% glutaraldehyde</p> <p>Nu-Cidex: 0.35%peracetic acid</p>	<p>ANIOXYDE 1000: 3% Hydrogen Peroxide</p> <p>DI Water: water</p> <p>Bleach 5.25% (10% Solution): Sodium Hypochlorite</p> <p>Ethanol 75%: Alcohol</p> <p>Sporox II: Hydrogen Peroxide</p> <p>DESCOTON extra: 12% glutaral</p> <p>IODOCLEAN: sodium thiosulfate and excipients</p> <p>SALVANIOS pH7/SALVANIOS pH10: Guanidinium acetate, ammonium propionate, excipients</p> <p>ultrasound probe cleaning wipes: Poly-prenyl acetate, propylene glycol</p> <p>DI Water: water</p> <p>Bleach 5.25% (10% Solution): Sodium Hypochlorite</p> <p>Ethanol 75%: Alcohol</p> <p>Sporox II: Hydrogen Peroxide</p> <p>ParaSafe: Disodium carbonate, citric acid, sodium carbonate</p> <p>Sani Cloth Active: Didecyldimethyl ammonium chloride 0.450%w/w</p>			
<p>Active Ingredients of the 4D Probe's Disinfectants:</p> <table border="1"> <tr> <td data-bbox="301 125 624 1003"> <p>CaviWipes: isopropanol, ethylene glycol monobutyl ether (2-butoxyethanol), diisobutylphenoxyethoxyethyl dimethyl benzyl ammonium chloride, water</p> <p>CaviWipes 1: isopropanol, ethanol, ethylene glycol monobutyl ether (2-butoxyethanol), didecyldimethylammonium chloride, water</p> <p>CaviCide: isopropanol, ethanol, ethylene glycol monobutyl ether (2-butoxyethanol), diisobutylphenoxyethoxyethyl dimethyl benzyl ammonium chloride, water</p> <p>Gigasept AF: didecyldimethylammonium chloride, glycine, aminoalkyl derivs tridecylpolyethylenglycoether.</p> <p>Rely+On ParaSafe: disodium carbonate, citric acid</p> </td> <td data-bbox="301 1003 624 1361"> <p>Cidex Plus: glutaraldehyde</p> <p>Cidex: alkaline glutaraldehyde</p> <p>Sonogel: carbomer, polyacrylat</p> <p>Sterihyde: Glutaraldehyde</p> <p>Osvan: Ammonia benzalkonium</p> <p>Neojodin: povidone-iodine</p> <p>Milton: sodium hypochlorite</p> <p>Hibitane: chlorhexidine</p> <p>Mimicare® Cold Sterilant: 22% Hydrogen Peroxide, 4.5% Peroxyacetic Acid</p> </td> <td data-bbox="301 1361 624 2107"></td> </tr> </table>			<p>CaviWipes: isopropanol, ethylene glycol monobutyl ether (2-butoxyethanol), diisobutylphenoxyethoxyethyl dimethyl benzyl ammonium chloride, water</p> <p>CaviWipes 1: isopropanol, ethanol, ethylene glycol monobutyl ether (2-butoxyethanol), didecyldimethylammonium chloride, water</p> <p>CaviCide: isopropanol, ethanol, ethylene glycol monobutyl ether (2-butoxyethanol), diisobutylphenoxyethoxyethyl dimethyl benzyl ammonium chloride, water</p> <p>Gigasept AF: didecyldimethylammonium chloride, glycine, aminoalkyl derivs tridecylpolyethylenglycoether.</p> <p>Rely+On ParaSafe: disodium carbonate, citric acid</p>	<p>Cidex Plus: glutaraldehyde</p> <p>Cidex: alkaline glutaraldehyde</p> <p>Sonogel: carbomer, polyacrylat</p> <p>Sterihyde: Glutaraldehyde</p> <p>Osvan: Ammonia benzalkonium</p> <p>Neojodin: povidone-iodine</p> <p>Milton: sodium hypochlorite</p> <p>Hibitane: chlorhexidine</p> <p>Mimicare® Cold Sterilant: 22% Hydrogen Peroxide, 4.5% Peroxyacetic Acid</p>	
<p>CaviWipes: isopropanol, ethylene glycol monobutyl ether (2-butoxyethanol), diisobutylphenoxyethoxyethyl dimethyl benzyl ammonium chloride, water</p> <p>CaviWipes 1: isopropanol, ethanol, ethylene glycol monobutyl ether (2-butoxyethanol), didecyldimethylammonium chloride, water</p> <p>CaviCide: isopropanol, ethanol, ethylene glycol monobutyl ether (2-butoxyethanol), diisobutylphenoxyethoxyethyl dimethyl benzyl ammonium chloride, water</p> <p>Gigasept AF: didecyldimethylammonium chloride, glycine, aminoalkyl derivs tridecylpolyethylenglycoether.</p> <p>Rely+On ParaSafe: disodium carbonate, citric acid</p>	<p>Cidex Plus: glutaraldehyde</p> <p>Cidex: alkaline glutaraldehyde</p> <p>Sonogel: carbomer, polyacrylat</p> <p>Sterihyde: Glutaraldehyde</p> <p>Osvan: Ammonia benzalkonium</p> <p>Neojodin: povidone-iodine</p> <p>Milton: sodium hypochlorite</p> <p>Hibitane: chlorhexidine</p> <p>Mimicare® Cold Sterilant: 22% Hydrogen Peroxide, 4.5% Peroxyacetic Acid</p>				

NOTE: please select the proper disinfectant for the probe of the Diagnostic Ultrasound System. The content of this document shall prevail in case of other new editions.

NOTE: Refer to local regulations for the use of each disinfectant. For use of each disinfectant, please refer to the manufacturer's instructions

Release date: May 17