

TEE Probe Cleaning and Disinfection Guide

Table 1 Compatible Cleaners

Cleaner	Active Ingredient	Concentration	Probe
Cidezyme/Enzol	Proteolytic enzymes	< 5%	P7-3T
EMpower	Proteolytic enzymes	< 2%	P7-3Ts
Metrizyme	Proteolytic enzymes	< 2%	P7-3TU
Neodisher MediClean forte	Trisodium nitrilotriacetate	5-10%	P7-3TE
Prolystica 2x conc. Enzymatic Presoak & cleaner	2,2-Iminodiethanol diethanolamine	1-2%	P8-3Ts
	Ethanolamine	1-5%	P8-2Ts
	Protease	0.1-1%	P8-2TU
	Ethoxylated alcohol	1-5%	
WIP'ANIOS CLEAN'UP	Polyalkylene glycol	1-5%	
	Glycerine	1-5%	
WIP'ANIOS CLEAN'UP	Association of surfactants, excipients	/	P8-2Ts
			P8-2TU

Table 2 Compatible Disinfectants

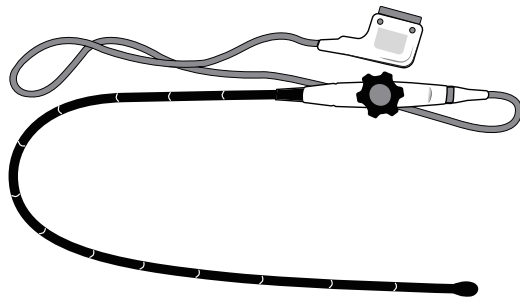
Disinfectant	Active Ingredient	Concentration	Probe
Cidex	Glutaraldehyde	2.55%	P7-3T
Cidex OPA	Ortho-phthalaldehyde	0.55%	P7-3Ts
Wavicide 01	Glutaraldehyde	2.65%	P7-3TU
			P7-3TE
			P8-3Ts
			P8-2Ts
Gigasept AF	Didecyldimethylammonium-chloride	15%	P7-3T
			P7-3Ts
	Glycine, aminoalkyl derivs	6.9%	P7-3TU
	Tridecylpolyethyleneglycol-ether	15-30%	P7-3TE
	N-(3-Aminopropyl)-N-dodecylpropane-1,3- diamine	< 5%	P8-3Ts
Gigasept FF (neu)	Dimethoxytetrahydrofuran	3.2%	P7-3T
	Succinaldehyde	11.9%	P7-3Ts
	Ethanol	5-15%	P7-3TU
	Methanol	5-10%	P7-3TE
	Alkylpolyethylenglycolpolypropyleneglycol- ether, 2-ethanol, 3,6-dioxa-1-dodecanol, 3,6-dioxadodecan-1-ol, DEGHE, diethylene glycol monohexyl ether, hexyl carbitol	1-5%	P8-3Ts

Table 2 Compatible Disinfectants (Continued)

Disinfectant	Active Ingredient	Concentration	Probe				
Gigasept PAA concentrate	Peracetic Acid	5%	P7-3T				
	Hydrogen peroxide	10-20%	P7-3Ts				
	Acetic Acid	10-20%	P7-3TU				
Metricide Plus 30	Glutaraldehyde	3.40%	P7-3TE				
Perasafe	Sodium Perborate	40-60%	P8-3Ts				
Metricide OPA Plus	Ortho-phthalaldehyde	0.60%	P7-3T				
Metricide	Glutaraldehyde	2.60%	P7-3Ts				
Metricide 28	Glutaraldehyde	2.50%	P7-3TU				
Steranios 2%, 2% N.G., 2% E.C.S.	Glutaraldehyde	2.00%	P7-3TE				
TD5	Glutaraldehyde	2.65%	P8-3Ts				
			P8-2Ts				
Rapidice PA HLD	Glutaraldehyde	2.65%	P8-2TU				
			Peracetic Acid	5%	P8-3Ts		
			Hydrogen Peroxide	22%			
			Trisodium Phosphate	4.3%			
Revital-Ox® Resert® High Level Disinfectant	Surfactant	4%					
			Hydrogen Peroxide	1.4-2.3%	P7-3T		
UltrOx™ High-Level disinfectant	2-Fluoroic Acid	≤2.50	P7-3Ts				
			P7-3TU				
Tristel Trio Wipe System	Hydrogen Peroxide	1.4-2.3%	P7-3TE				
			2-Fluoroic Acid	≤2.50	P8-3Ts		
					Propan-2-OL	1-10%	
					Polymeric Biguanide Hydrochloride	< 1%	
					5-Chloro-2-Isothiazol-3-one	< 1%	
2-Methyl-2H-Isothiazol-3-O Chlorinedioxide	< 1%						
ANIOXYDE 1000	Sodiumchlorite 100%	< 1%					
			Hydrogen peroxide	3%	P8-2Ts		
Rapidice OPA-28	Ortho-phthalaldehyde	0.575%	P8-2TU				

Notes:

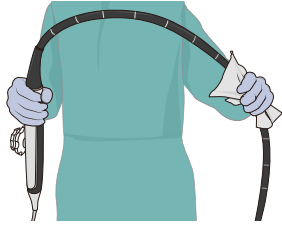
- The commercial availability of the cleaners and disinfectants in your region is subject to local regulation and authorization. For additional information, please refer to the TEE operator's manual.
- The TEE probe pictures displayed in this document are only for reference. The actual probe that you purchase shall prevail.
- Do not soak the probe for a period longer than the maximum time specified by the manufacturer. Otherwise, the probe may be damaged.



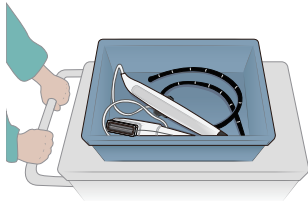
Cleaning

- Wear protective devices such as surgical caps, masks, gloves, goggles or face shield, and dedicated lab suit when cleaning and disinfecting the TEE probe.
- After using the probe, freeze the image, power off the ultrasound system, and disconnect the probe from the ultrasound system, to prevent data loss due to hot plug. If the sheath is used, take off the sheath and dispose it as directed by the hospital. Cleaning and disinfection are required even if the sheath is used.

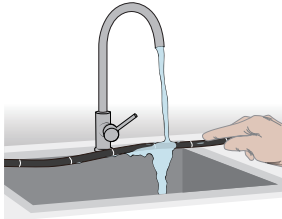
- Wipe away the ultrasound gel or other visible dirt on the surface of the probe by using a damp piece of disposable lint-free soft cloth or tissue. Rinse the probe insertion part under flowing water if possible before transportation.



- Place the contaminated probe in an appropriate hard transport container and transport it to the decontamination room. During transportation, avoid over bending the insertion part (the bending diameter cannot be smaller than 30cm), and avoid colliding or squeezing the probe. Do not touch the acoustic head with heavy objects. Transport in a timely manner so as to avoid allowing bodily fluids to dry on the probe's surface

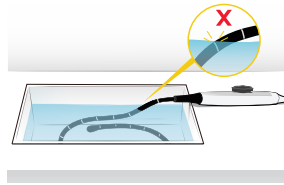


- Rinse the probe insertion part under flowing water for about 1 minute to preliminarily remove the contaminants from the probe surface.

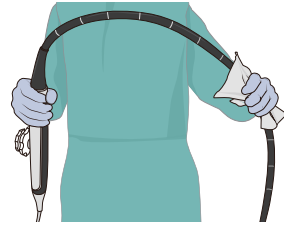


- Select an appropriate cleaner. For details, see "Table 1 Compatible Cleaners" for the TEE probe. Follow the manufacturer's instructions to prepare and use the cleaner. Select an appropriate method:
 - Soaking:** Soak the probe in the cleaner solution for at least 1 minute or follow the manufacturer's instructions. Wipe and wash the probe surface gently by using a piece of lint-free soft cloth or soft sponge until no dirt is visible. When necessary, wash the locating groove and other items by using disposable cotton swabs. Avoid using a brush to wash the lens because it may damage the probe.

Only the section from distal end to the 100 cm marker (70 cm for pediatric TEE probe) on the flexible shaft can be immersed in the cleaner solution. The handle, cable and connector can only be cleaned with a wrung out soft cloth moistened with cleaners.

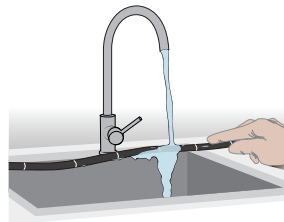


- Wiping:** Use a commercially available cleaning wipe, cleaning sponge, or a soft cloth soaked with a cleaning spray to wipe and clean all surfaces of the probe thoroughly for at least 1 minute or follow the manufacturer's instructions until the probe is clean. When necessary, wash the locating groove and other items by using disposable cotton swabs.



If there are much dirt, soaking is recommended.

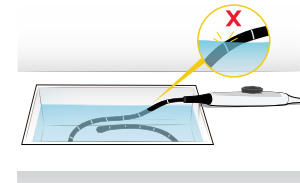
- Rinse the probe insertion part thoroughly with plenty of clean flowing water at room temperature for about 1 minute to remove the residual dirt and cleaners. Or follow the rinsing method specified by the manufacturer. Use moistened soft cloth to wipe the residual cleaners on the handle, cable, and connector.



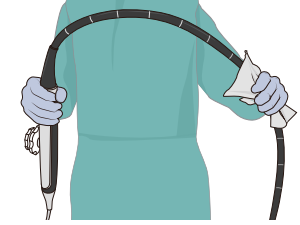
- Dry the probe with a disposable lint-free soft cloth or tissue. Do not dry the probe by heating.
- Inspect the probe. If visible dirt still exists, repeat the preceding steps to clean the probe until it is all clean.

Disinfection

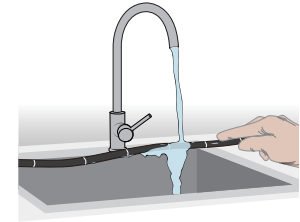
- Select an appropriate high-level disinfectant to disinfect the probe. For details, see "Table 2 Compatible Disinfectants" for the TEE probe. Follow the manufacturer's instructions to use the high-level disinfectant. Prepare a disinfectant by using sterile distilled or softened water when necessary. Select an appropriate method:
 - Soaking:** Soak the probe in the disinfectant solution and shake the probe properly to remove bubbles on the surface of the probe. For the probe soaking duration, see the disinfectant manufacturer's instructions. Only the section from distal end to the 100 cm marker (70 cm for pediatric TEE probe) on the flexible shaft can be immersed in the disinfectant solution. The handle, cable and connector can only be disinfected with a wrung out soft cloth moistened with disinfectants.



- Wiping:** Use a commercially available disinfecting wipe, or a disposable sterile lint-free soft cloth soaked with a disinfecting spray to wipe and disinfect all surfaces of the probe thoroughly for the time specified in the manufacturer's instructions.



- Rinse the probe insertion part thoroughly with plenty of clean flowing water at room temperature for about 1 minute to remove the residual dirt and disinfectants. Or follow the rinsing method specified by the manufacturer. Use moistened soft cloth to wipe the residual disinfectants on the handle, cable, and connector.



- Dry the probe with a disposable lint-free soft cloth or tissue. Do not dry the probe by heating.
- Check whether the probe has defects such as peeling, rifts, bumps, cracks, or liquid spill. If such defects exist, the probe has reached the end of its service life. In this case, stop using it and contact the Mindray service department.

Storage

Hang the probe downwards vertically and store it in a cool and dry probe storage cabinet. Prevent the probe from contacting the cabinet wall. If necessary, repeat the cleaning or disinfection process before the next use.

