trophon® EPR

Innovative, automated high level disinfection for ultrasound probes

Have you trophoned today?

Join over 3,000 health care facilities who do (including 49 of the top 50 hospitals in the U.S.)

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Why and When to HLD

Effective high level disinfection (HLD) of ultrasound probes is a crucial factor in the fight against the spread of Healthcare Acquired Infections (HAIs).

Why do I need to HLD my ultrasound probes?

There can be serious consequences if proper procedures are not followed. Patients have been put at risk of infection due to inadequate cleaning or disinfecting of reusable medical devices – and even death has been associated with improperly reprocessed ultrasound probes[1,2]

Not only is HLD an important exercise in ensuring patient safety, it is also a legal requirement.

The Guidelines

The Food and Drug Administration (FDA) requires that a reusable medical device be properly reprocessed between patients to prevent infection. HLD is mandated by the **CDC** as the minimum standard in ultrasound probe reprocessing for semi-critical procedures. Multiple guidelines now recommend HLD between patients to reduce the risk of cross contamination, including the AIUM Guidelines 2014 and the AAMI Standards.

When should I be performing HLD?

HLD should be performed on ultrasound probes that are used in semi-critical procedures (i.e. intracavity and surface ultrasound probes that contact mucous membranes or non-intact skin), as defined by the Spaulding Classification.

Applying the correct level of disinfection is based on the procedure the probe is going to be used for on the next patient.

When to HLD with trophon®

WHAT PROCEDURE WILL YOUR PROBE BE USED FOR?

Procedure

Spaulding Classification

Disinfection / Sterilization Requirements

Probe may contact sterile tissue or blood

Critical

- intraoperative procedures
- drainages
- biopsies
- needle guidance
- transvaginal oocyte retrieval
- venous catheter placement
- vascular ablation

Sterilize* or HLD

Probe may contact mucous membranes and non intact skin

Semi-Critical

Intracavity

- transvaginal scans
- transrectal scans

Surface ultrasound (broken skin)

- wound scanning
- burn evaluation

HLD

Probe may contact healthy, intact skin

Non-Critical

- surface ultrasound (intact skin)

LLD or HLD

PROBE IS READY FOR PROCEDURE

*Critical probes should be sterilized, or can also be high level disinfected and used with a sterile sheath. Note: The use of a sheath does not negate the need for HLD.[1]

Making the choice simple

For outstanding ultrasound probe HLD compliance.

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trophon helps overcome the problems of traditional disinfection methods

Other existing HLD methods such as soaking can be risky and present many issues.

Potential risks	Traditional disinfection methods
Probe handles may remain contaminated…	• Due to the risk of probe damage, traditional disinfection methods may not allow the transducer handle to be immersed in the solution.[3] • Residual bacteria (e.g. MRSA) has been shown to persist on >80% of handles which are not immersed during liquid soak disinfection.[4]
Probe sheaths can often have microscopic tears…	• Use of protective sheaths (or condoms) does not negate need for HLD. • Evidence shows that sheaths can have microscopic perforations before use and often have micro tears, increasing infection transmission risk.[5-9]
Manual soaking can be ineffective and toxic…	• Manual methods (e.g. soaking in bulk liquid disinfectants) can be ineffective, inefficient and arduous for the operator – resulting in error or lack of compliance. • Evidence has shown manual methods can be toxic, increasing the risk of exposure to dangerous chemicals.[10,11]
Soaking with chemicals can be a health and safety risk…	• GTA and OPA can pose severe health and safety risks for patients and staff who are exposed. • Evidence has shown both GTA and OPA are ineffective against HPVs that can contaminate ultrasound probes (HPV16).[12-20]

GTA, glutaraldehyde; MRSA, Methicillin Resistant Stapylococcus Aureus; OPA, ortho-phthaladehyde

trophon is the **safe**, **versatile** and **simple** way to prevent ultrasound probe cross-infection risk

With the growing trend around the world towards stricter ultrasound probe reprocessing guidelines, traditional systems have been falling behind in their ability to meet today's demanding requirements. The cutting edge technology used in trophon has really disrupted the disinfection market. It truly is a breakthrough solution that addresses current challenges across the three core areas of Safety, Versatility, and Simplicity.

Safe

trophon delivers safety for patients, staff and the environment

- ✓ Protecting patients against healthcare acquired infections (HAIs) with powerful disinfection technology
- ✓ Safeguarding staff and the environment from hazardous and toxic side effects of traditional disinfection methods

Versatile

trophon streamlines set-up, workflow and has extensive probe compatibility

- ✓ Compact, self-contained design enables HLD to be conducted in a variety of spaces, including next to the ultrasound console in exam rooms
- ✓ Simple installation – no plumbing to water required

Simple

trophon makes ultrasound probe disinfection automated, consistent and fast

- ✓ Easy to operate – minimal training required
- ✓ Simple traceability system ensures all reprocessing activities are documented so you are always audit ready

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trophon delivers **safety** for patients, staff and the environment

Patients

trophon reduces the risk of ultrasound related cross-infection in your facility

- ✓ Effective high level disinfection (bactericidal, fungicidal and virucidal) greatly reduces infection risk for patients – trophon is proven effective against the widest range of microorganisms, including high-risk HPV[21]
- ✓ Meets a range of international standards for high level disinfection[22]
- ✓ Automated closed system minimizes patient exposure to chemicals

Staff

trophon minimizes staff exposure to hazardous chemicals, fumes and spills

- ✓ Automated closed system minimizes staff exposure to chemicals – disinfection cartridge is sealed until inside trophon
- ✓ No manual test strips
- ✓ May reduce the need for personal protective equipment and special ventilation

Environment

trophon generates environmentally friendly by-products for safe and easy disposal

- ✓ Patented system breaks down the Sonex mist into oxygen and water
- ✓ >70% of trophon components are recyclable, including Sonex-HL™ cartridges
- ✓ Small discharge tray for easy disposal of environmentally-friendly by-products

trophon offers **versatility** with streamlined set-up, work flow and extensive probe compatibility

Set-up

trophon can be set up easily in a wide range of locations, including the point of care

✓ Compact size can fit in most examination rooms

✓ Installation options include wall, bench or cart-mount

✓ No need for sink or plumbing

✓ No open chemicals – eliminates need for special ventilation

Workflow

trophon streamlines practice workflows to maximize patient throughput and cost effectiveness

✓ Simple workflows enable faster turnaround without sacrificing safety, compliance or effectiveness

✓ Automated closed disinfectant system

✓ Compact size with a plug-and-play design to fit your workflow

✓ Best practice for POC workflow

Compatibility

trophon is validated for use with more than 1,000 surface and intracavity ultrasound probes across all major manufacturers

✓ Extensive probe compatibility testing with OEM final approval

✓ Preserves the life of your valuable ultrasound probes

✓ Check if your probe is compatible with trophon by visiting:

www.trophon.com/trophon/probe-compatibility

trophon provides **simplicity** with automated, consistent and fast disinfection technology

Automated

trophon is a fully automated system that is simple to operate and requires minimal training or intervention during operation

- ✓ Display screen prompts each step during operation
- ✓ Start button allows one touch operation
- ✓ Auto-cycle validation by sensors
- ✓ Chemical indicator eliminates manual MRC testing

Ultrasound technologists reported higher satisfaction with trophon's automated technology[23]

Consistent

trophon delivers consistent, high level disinfection to maximize compliance with guidelines and accreditation standards

- ✓ Completely automated process for consistent HLD – critical process parameters achieved for each HLD cycle
- ✓ Each HLD cycle monitored by sophisticated sensor technology and Chemical Indicator
- ✓ Complies with leading disinfection guidelines to help you meet auditing and accreditation requirements

Fast

trophon's simple workflows allow for quicker turnaround without sacrificing safety, compliance or effectiveness

- ✓ Fast 7-minute cycle
- ✓ Innovative, rapid-acting sonically-activated hydrogen peroxide mist
- ✓ Disinfects both handle and probe in one step
- ✓ No time wasted with extra PPE, MEC testing and probe transport

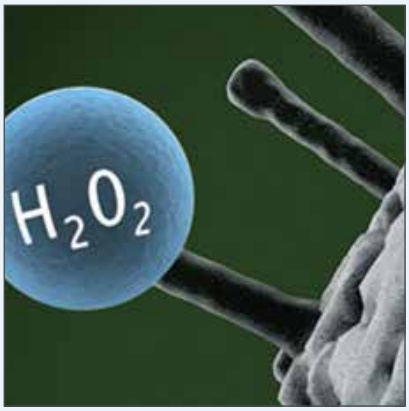
trophon technology

trophon uses high-frequency ultrasonic vibrations to generate a sonically activated, supercharged mist that kills bacteria, fungi and viruses that may be harbored on ultrasound probes.

Sonicated

Ultrasonic vibrations generate sound-wave energy to create an ultrafine mist

- ✓ Quantity-controlled hydrogen peroxide mist covers the entire surface of the probe and handle
- ✓ Mist particles can penetrate any imperfections in the probe surface – even shadowed areas formed by crevices and grooves
- ✓ Small controlled dose of sonicated hydrogen peroxide mist ensures compatibility with approved ultrasound probes



Supercharged

Free radicals disperse, disrupt and kill bacteria, fungi and viruses

- ✓ Sonification creates a supercharged mixture of hydrogen peroxide mist and free radicals that kills bacteria and fungi
- ✓ Free radicals disrupt viruses to prevent infection and replication
- ✓ Intelligent sensors monitor temperature, mist volume and flow rates through every cycle to maintain a stable HLD environment
- ✓ Residual hydrogen peroxide is broken-down into environmentally-friendly waste

Success

A global breakthrough in HLD for intracavity and surface ultrasound probes

- ✓ On screen message confirms when HLD cycle is complete
- ✓ Success is also validated by the chemical indicator changing colour

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trophon has you covered

trophon's user-friendly traceability solution

trophon offers a traceability solution designed to help you to meet audit requirements. Four optional accessories make sure you are covered:

- printer,
- logbook
- quality assurance software tool to track information from cycle to cycle
- clean probe cover that protects intracavity and surface ultrasound probes from recontamination, and allows you to link to patient

trophon's Consumables and accessories

trophon requires just two simple consumables (sealed cartridges and chemical indicators), giving you cost-effective and easy ultrasound probe high level disinfection.

There's also a choice of handy optional accessories for added versatility in set-up, to optimise your workflow and to help you comply with audit requirements.

We go further in microbial efficacy…

trophon inactivates the mandated subset of microorganisms, as required by US regulations. trophon is proven to also eliminate an extended range of infectious pathogens, including*:

✓ Sexually Transmitted Infections (STIs)

✓ Clostridium difficile spores

✓ Drug resistant bacteria

Discover more by visiting www.trophon.com

TECHNICAL SPECIFICATIONS	
Weight	38 lb (17 kg)
Dimensions	19.3"H x 13.6" W x 13.6" D (490mm H x 345mm W x 345mm D)
Operating Temperature	63-80 °F (17-27 °C)
Electrical	Rated input voltage: 120V AC Rated input current: 5Amp, 50/60Hz

PRODUCT CODES			
trophon EPR	N00010-NNA	trophon Printer Wall Mount	N00105
Sonex-HL (6 X 80ml bottles)	N00037-NNA	trophon Connect	N00086-ROW
Chemical Indicators (300 disks per box)	N00091-NNA	trophon Cart	N00041-NNA
trophon Log Book (pack of 5)	N00098-NNA	trophon Wall Mount	N00017-NNA
trophon Printer	N00048-NNA	trophon Curved Probe Positioner	N00099-ROW
trophon Printer Label Roll	N00049-ROW	Clean Ultrasound Probe Cover (100 covers)	N00102
trophon Printer Cart Mount	N00104		

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* Nanosonics Internal Test Data

Contact us

Nanosonics is a global innovator in infection prevention. Our unique, automated trophon® high level disinfection device is paving the way around the world in setting a new standard of care in ultrasound probe disinfection practices. trophon effectively addresses a range of issues associated with traditional methods and offers a breakthrough solution across three core areas: Safety, Versatility, and Simplicity. Nanosonics is headquartered in Sydney, Australia with a highly experienced team of professionals dedicated to providing the best in infection prevention technology.

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PLACE FOR A CARD

trophon®

PROVEN TO KILL HIGH-RISK HPV[21]

Safe. Versatile. Simple trophon

Infection prevention without compromise.

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