

Simplified Warming Protocol


Oocytes and Embryos

STEPS 9–12 MUST BE PERFORMED AT ROOM TEMPERATURE (22–27°C)

Do not begin warming procedure until you have a pre-equilibrated dish of appropriate culture medium supplemented with SSS or DSS at 20% (v/v), or HSA at 12 mg/ml for final recovery of specimen(s).

Have all necessary materials, tools, and equipment ready and easily accessible before starting procedure. Refer to the vitrification device warming protocol and product insert for detailed instructions and warnings.

- Set up thawing dishes (as shown in diagram):
 - At 37°C:** Aseptically dispense a minimum volume of 1 mL of TS and warm to 37°C in an incubator without CO₂ or on a heating stage at least 30 minutes prior to starting warming procedure.
- Identify the device sample(s) to be warmed and quickly transfer from LN₂ storage to an LN₂ filled holding reservoir in preparation for warming procedure.
- Place LN₂ filled holding reservoir in close proximity to the working area and stage of the microscope in order to achieve subsequent rapid manipulation from reservoir to TS.
- Remove TS dish from 37°C incubator or heating stage and place it under focus on top of the microscope stage.
- Using forceps, hold the upper end of the device with the identification label facing up.
 - Option A*:** Quickly but gently remove the cap under LN₂, twisting the parts until release.
 - Option B:** Quickly take the device out from the LN₂, then quickly remove the cap with a gentle twist.

 *Laboratory should consult their own procedures and protocols.*
- Immediately plunge the concave tip of the device, with the specimen(s) facing up, into the 37°C TS. Under microscopic observation, gently move the device until the specimen(s) are released from the tip.
- Leave the specimen(s) for a total of 1 minute in the TS.

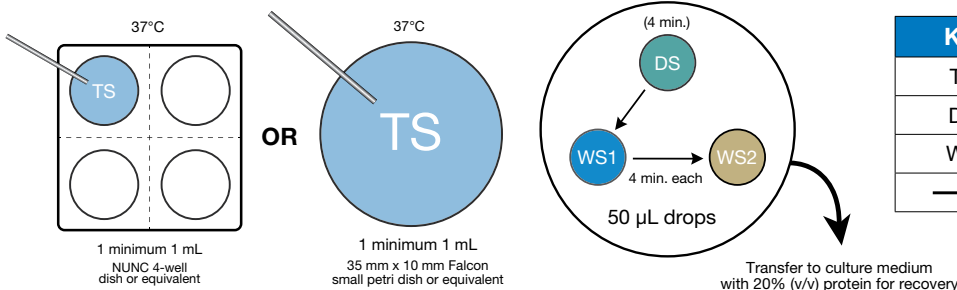
- Thirty (30) seconds following the initial plunge, gently pipette the specimen(s), if floating, and place at the bottom of the TS.

Steps 9–12 must be performed at room temperature (22–27°C).

- At room temperature:** Aseptically dispense one (1) 50 µL drop of DS on a sterile Petri dish.
- Transfer specimen(s) to DS for 4 minutes. Gently pipette specimens once to ensure complete rinse in DS.
 - During the 4 minute exposure in DS, aseptically dispense two (2) 50 µL drops of WS (WS1, WS2) as shown in diagram.
 - Transfer specimen(s) to each WS1 then WS2 for 4 minutes each, undisturbed.
 - Transfer warmed OOCYTE(S) to pre-equilibrated culture medium with 20% (v/v) protein supplement or 12 mg/mL for recovery (2–3 hours to allow time for spindle re-formation) prior to subsequent manipulations.

There are two options for warmed EMBRYO(S):

- For immediate transfer to patient: transfer EMBRYO(S) to pre-equilibrated "transfer" medium containing 20% (v/v) protein supplement or 12 mg/mL.
- For further culture: transfer EMBRYO(S) to pre-equilibrated culture medium containing 20% (v/v) protein supplement or 12 mg/mL for a 4 hour recovery period. After recovery period, transfer EMBRYO(S) to culture medium with 10% (v/v) protein and incubate accordingly until desired developmental stage has been reached for transfer to patient.



KEY	
TS	Thawing Solution
DS	Dilution Solution
WS	Washing Solution
→	Transfer specimen to next drop

Simplified Warming Protocol

Tips

- Have all necessary materials, tools, and equipment ready and easily accessible before starting procedure.
 - Refer to the vitrification device product insert for specific instructions.
 - Pre-equilibrate a dish of appropriate culture medium with 20% (v/v) or 12 mg/mL protein for final recovery of specimen(s).
 - The device must remain submerged in LN₂ until ready to warm. When transferring the device from LN₂ filled holding reservoir, or between LN₂ storage tanks, vitrification devices should always be submerged in an LN₂ filled goblet to prevent uncontrolled/premature warming in air.
 - Set up warming dish with a minimum volume of 1 mL of TS, at least 30 minutes prior to beginning procedure.
 - Remove the TS dish from 37°C incubator or heating stage right before the warming procedure.
 - Immediately immerse the concave tip of the device into the 37°C TS after removed from LN₂ (within 2 seconds).
 - Under microscopic observation, gently move the device until the specimen(s) are released from the tip.
 - Keep focusing under the microscope while immersing tip into TS to locate the specimen(s).
 - Limit exposure to light while moving the specimens through the solutions.
 - If you choose to, you may overlay DS and WS drops with 8.0 mL to 8.5 mL of equilibrated mineral oil, at least 45 minutes prior to starting warming procedure.
- 🗨 *Following complete recovery (2–4 hours post-warming), oocytes must be fertilized by ICSI due to zona hardening during vitrification.*

www.irvinesci.com

FUJIFILM
Value from Innovation



FUJIFILM Irvine Scientific and the FUJIFILM Irvine Scientific logo are registered trademarks of FUJIFILM Irvine Scientific, Inc. in various jurisdictions. All other trademarks are the property of their respective owners.

© 2024 FUJIFILM Irvine Scientific. P/N 002041 Rev.01

FUJIFILM IRVINE SCIENTIFIC – CORPORATE

1830 E Warner Avenue, Santa Ana, CA 92705 USA

Phone: 1 (949) 261-7800

Toll Free: 1 (800) 437-5706

Fax: 1 (949) 261-6522

Support: tmrequest@irvinesci.com