CRYOLOCK®

A versatile system for vitrification of human oocytes and embryos.

Description

Intended Use

Cryolock® Family Devices are cryopreservation storage devices that are intended for use in vitrification procedures to contain and maintain human 1-Cell stage embryos.

For non US-countries: For Oocytes and/or Embryos.

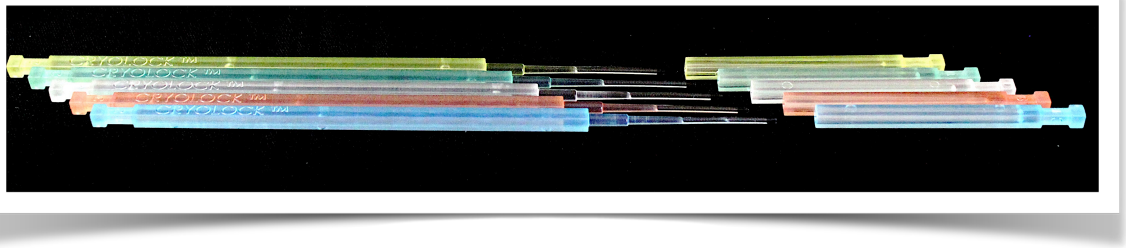
Design

Cryolock® is a square shape stick, with 4 flat surfaces. Both the cap and body possess the same coefficient of expansion, ensuring and equally secure coupling at room temperature as well as at low cryogenic temperatures.

Body and cap have gaps on their extremes that allow easy grip with forceps during manipulation.

Material

Both Cryolock® components: Body and cap are made of Polystyrene medical grade, being made of the same material facilitates an even temperature conduction from side to side of the device.



Presentation

Cryolock™ is available on five different translucent colors: clear, yellow, orange, blue and green packed in pouches of 5 same color Cryolock® units.

Cryolock® pouches are sterilized by gamma radiation.

Semi-closed System

Protocol

Cryolock is a very simple vitrification device, easy to use, where no extra tools different to forceps are needed.

Vitrification

Use a liquid nitrogen-resistant label to identify oocytes and embryos of the patients, using the label on the same surface where Cryolock® is engraved.
Prepare the sample for vitrification according to laboratory vitrification protocol.

With a micropipette, carefully load a maximum of 2 specimens on the concave surface of the tip (same side of Cryolock® logo) and about 3mm (1/8") from the edge of tip (use black mark as a reference) removing any excess of cryoprotectant solution leaving as minimum volume of vitrification media as possible (≤ 1 µL).

Immediately immerse Tip and Cap under LN_2. Allow equilibration until stop bubbling. Carefully insert the tip into the cap twisting tightly enough until secure.

Store specimens in dewars following the laboratory vitrification protocol. Always store the Cryolock® with the cap facing down.

For more information visit www.biotechinc.com

Warming

Prepare the warming solutions according to laboratory vitrification protocol.
Identify the sample to be thawed.
Place the warming solution under microscopic view.

Using forceps hold the upper extreme of the Cryoloc® body and quickly but gently remove the cap under LN_2 twisting the parts until release.
Immediately plunge the tip of Cryolock® with specimens facing up into the warming solution at 37°C.

Under microscopic observation, gently move the Cryolock® until embryos are released from the tip.
Continue the warming according to laboratory vitrification / warming protocol.

Discard Cryolock after completion of procedure.
Cryolocks are not reusable.

Closure System

Contact with LN_2

Vitrification can be performed by two different approaches, Open and Closed Systems, where the difference lies on contact with liquid Nitrogen LN_2, however Cryolock® Semi-closed system has the advantage of the simplicity of an open system along with its high cooling rate and the safety of a closed system where there is no contact with LN_2 during the storage, enhancing survival and embryo developmental rates.

Cryolock® body and cap have been designed to be complementary each other to make a secure and hermetic seal once the cap has been placed and tightened on the tip of the Cryolock®.

The hermetic seal of the Cryolock is created by a tapered surface of 0.250" long where Cryolock body and cap fit in a perfect seal creating then a closure system able to keep the tip where the specimens are contained, being isolated from LN_2 once the Cryolock is submerged into the LN_2.
While Cryolock is under LN_2 the cap shrinks over the sealing area due to the low temperatures; reason why, while specimens are stored, the LN_2 cannot recirculate inside the cap toward the tip or vice versa.
The only time specimens will be on direct contact with LN_2 is while capping under LN_2 when is recommended to use individual batches of LN_2 for patient in order to reduce/ avoid the risk of cross-contamination during cryopreservation procedures and storage.

Cryolock References

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Contact Us

Phone # 1-678-341-8136
Fax # 1-678-807-7851
Email:
sales@biotechinc.com

Biotech Inc.

5975 Shiloh Road Suite 101 Alpharetta, GA 30005 USA

www.biotechinc.com