

# VITRIFICATION CRYOTOP®



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This catalogue shows a selection of articles on using the Cryotop® Method from Kitazato published in various scientific magazines. These publications were not created for commercial purposes; scientific dissemination is their only objective.

The purpose of this catalogue is to show the results provided by the Cryotop® Method from Kitazato as a cryopreservation method.



# VITRIFICATION CRYOTOP®





## THE CRYOTOP® METHOD

Kitazato is recognized as one of the pioneering brands in driving and improving vitrification. Its greatest contribution in this field has been the development of the renowned Cryotop® Method, the global leader in vitrification of oocytes and embryos, in all stages of development.

Cryotop® is the special vitrification container consisting of a fine, thin film strip attached to hard plastic handle for the minimum volume cooling to realize highest cooling & warming rates resulting in over 90% post-thaw survival. The Cryotop® Method is simple, reliable, universal safe and easy for anyone. After over a decade on the market, the Cryotop® Method has been applied in over 1,500,000 clinical cases in over 90 countries and 2,200 assisted reproduction centers. Hundreds of scientific publications certify their excellent results.



## MAIN ADVANTAGES

- Survival rates over 90%
- Best cooling and warming rates in the market
- Same protocol, easy to follow
- Valid for all stage of development: oocytes, PN, embryos and blastocysts

## VERSATILITY

- Egg Banking: to avoid difficult synchronization donor-recipient
- PGD/PGS Analysis: grant the survival of your biopsied embryos
- Fertility Preservation
- Re-vitrification: transfer of vitrified embryos from previously vitrified specimens
- Differed Embryo Transfer: to optimize the conditions of the endometrium before the transfer
- Management of poor responders: accumulation of oocytes

## STANDARDIZATION

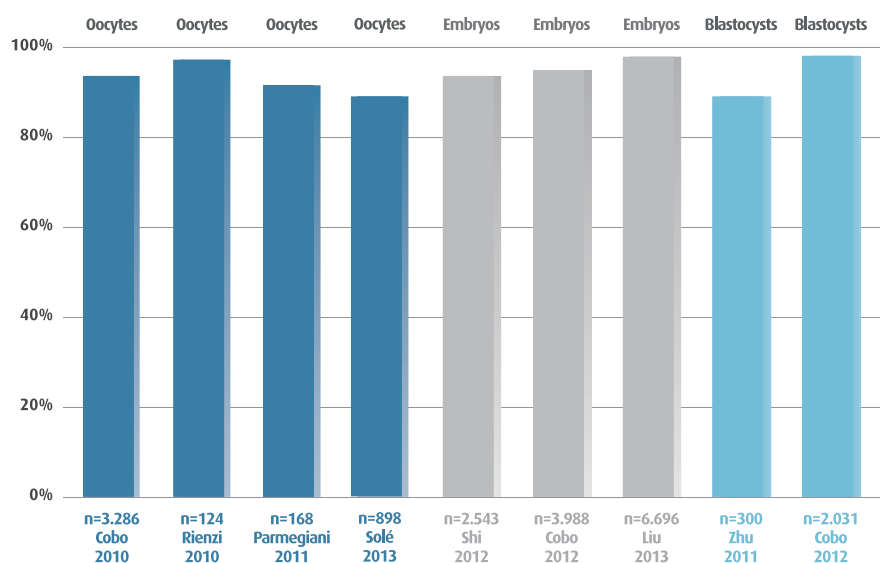
- Simplified Protocol
- Optimized results
- Efficient time saving technique
- Contributes to cost effective inventory control

## KITAZATO HAS THE DISTINGUISHED TECHNOLOGY



With its revolutionary design and protocol, Cryotop® Method has high cooling and warming rate. Several studies have shown that the warming rate is more crucial for increasing survival rates. Furthermore, all CryoTip, Cryotop® and Cryotop®CL are developed and patented by Kitazato.

High cooling rate and warming rate are achieved by minimal volume of the solution in the vitrification. All types of Cryotop® allow loading of the specimens with a volume of 0.1µL; this minimal volume allows the reduction of the concentration of “cryoprotectant agents”.



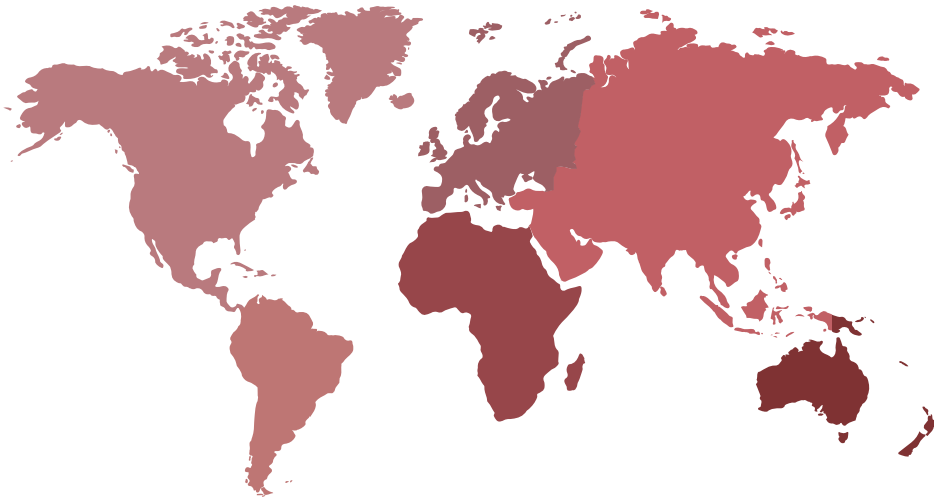
### CRYOTOP® SURVIVAL RATES IN HUMAN SPECIMEN

There are high survival rates for oocytes and embryos in all stages of development, reported in numerous clinical publications with the largest study samples in the whole sector.

# THE WORLD LEADER IN CRYOPRESERVATION

## CRYOTOP® METHOD IS PRACTICED IN 93 COUNTRIES WORLDWIDE

Leadership based on guaranteed quality, versatility and commitment with IVF professionals.



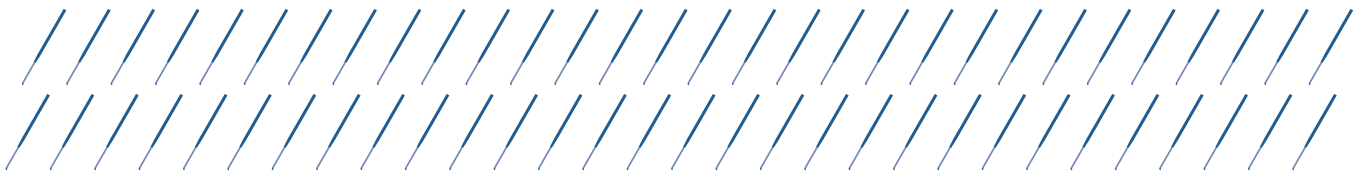
## 2,400 CLINICAL PAPERS PUBLISHED USING CRYOTOP®



## 2,200 CLINICS PUT THEIR TRUST IN CRYOTOP®



## 8,000,000 CRYOTOP® UNITS SOLD WORLDWIDE



## 500 EMBRYOLOGISTS TRAINED PER YEAR

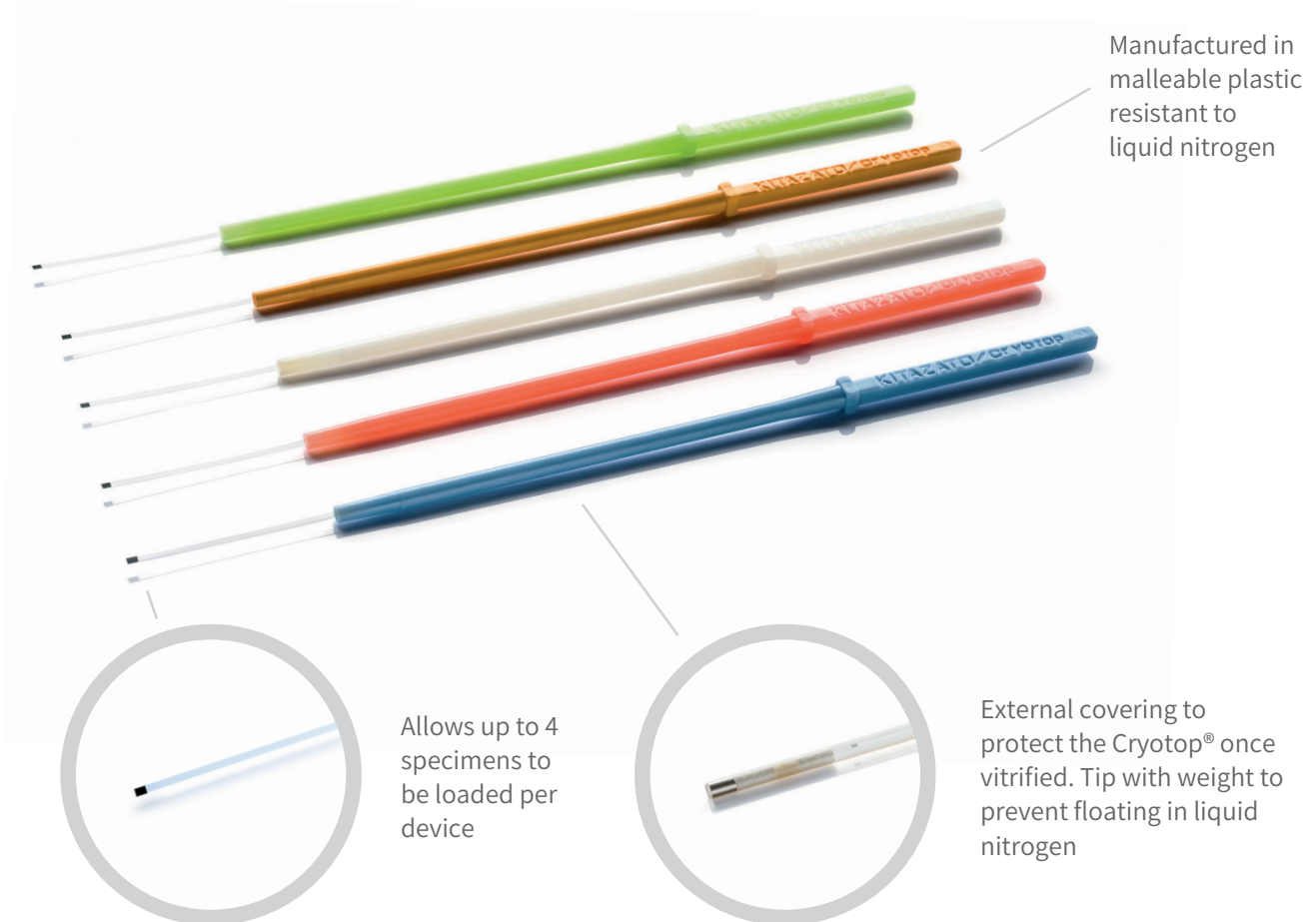


## CRYOTOP®

Cryotop® is a vitrification device consisting of a fine strip of transparent film attached to a plastic handle resistant to liquid nitrogen.

Cryotop® is the logical choice for obtaining the best clinical results. Its unparalleled survival rates for oocytes and embryos, at every stage of development, have contributed to bringing hundreds of healthy babies into the world in the last decade.

*Available in 5 different colors*



Its design allows the loading of specimens for vitrification with a minimum volume (0.1 µl), providing the best cooling and warming rates on the market (-23,000°C/minute and 42,000°C/minute respectively) which in turn lead to the best survival rates.

Order number	Description	Color	Unit
81111	Cryotop®(G)	Green	10/Pack
81112	Cryotop®(R)	Red	10/Pack
81113	Cryotop®(W)	White	10/Pack
81114	Cryotop®(B)	Blue	10/Pack
81115	Cryotop®(Y)	Yellow	10/Pack

# CRYOTOP® CL

Cryotop®CL is a vitrification device especially designed to maximize the cooling rate of the closed system. It allows the whole device to be sealed in a cover straw, allowing the vitrification of the specimens without direct contact with the liquid nitrogen.

## MAIN FEATURES

### METAL STRIP EMBEDDED ALONG THE SIDE OF THE LOADING STRIP

Aids in accelerating the cooling rate as it comes in contact with the metal weight of the cover straw  
The looped-tip design prevents from scratching the dish during the thawing procedure

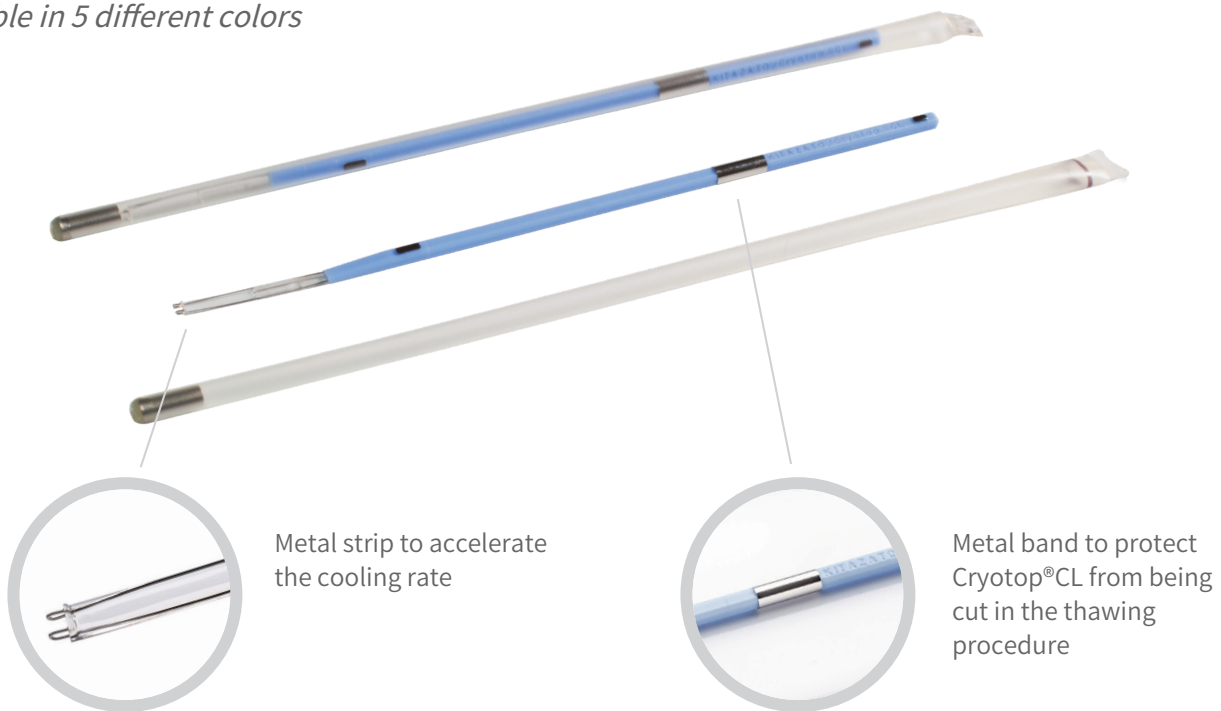
### METAL BAND ON THE HANDLE PART

Protects the Cryotop®CL handle from being cut in the thawing procedure

### TAPERED SHAPED STRAW

Facilitate the introduction of Cryotop®CL into the cover straw

*Available in 5 different colors*



Order number	Description	Color	Unit
81131	Cryotop®CL(G)	Green	10/Pack
81132	Cryotop®CL(R)	Red	10/Pack
81133	Cryotop®CL(W)	White	10/Pack
81134	Cryotop®CL(B)	Blue	10/Pack
81135	Cryotop®CL(Y)	Yellow	10/Pack

## QUALITY CONTROL

- Sterility Test
- Endotoxin  $\leq 0.5$  EU/device
- Mouse Embryo Assay  $\geq 80\%$
- Appearance
- Tensile strength  $> 5$  N
- Radiation Sterilization (SAL10<sup>-6</sup>)



## MEDIA

### VT601 - VITRIFICATION SOLUTIONS



- 1 Vial 1.5 mL of BS (Basic Solution)
- 1 Vial 1.5 mL of ES (Equilibration Solution)
- 2 Vials 1.5 mL of VS (Vitrification Solution)

Kitazato Media are the most versatile option for cryopreservation in your laboratory. Reduce your costs by using the same media for vitrification and warming of oocytes and embryos, in all their stages of development, from Zygote stage to Blastocyst. The composition of the Kitazato media is entirely synthetic.

### VT602 - THAWING SOLUTIONS

- 2 Vials 4.0 mL of TS (Thawing Solution)
- 1 Vial 4.0 mL of DS (Diluent Solution)
- 1 Vial 4.0 mL of WS (Washing Solution)



### QUALITY CONTROL

- pH: 7.2 - 7.6
- Osmolality
- Endotoxin: <0.25EU/mL
- Sterility
- MEA (Mouse Embryo Assay): One cell assay  $\geq 80\%$  after 96 hours

### COMPOSITION

- HEPES within Basic Culture Media
- Ethylene Glycol
- Dimethyl Sulfoxide
- Trehalose
- Hydroxypropyl Cellulose



## VT601 - TOP - VITRIFICATION KIT

- 1 Vial 1.5 mL of BS (Basic Solution)
- 1 Vial 1.5mL of ES (Equilibration Solution)
- 2 Vials 1.5mL of VS (Vitrification Solution)
- 4 pcs of Cryotop®
- 2 pcs of Repro Plate - K1(6well)



Vitrification Kit and Thawing Kit contains all the media, device and dish to follow the protocol.

## VT602 - KIT - THAWING KIT

- 2 Vials 4.0 mL of TS (Thawing Solution)
- 1 Vial 4.0mL of DS (Diluent Solution)
- 1 Vial 4.0mL of WS (Washing Solution)
- 1 pc of Repro Plate - K1(6well)
- 2 pcs of 35mm Dish



Order number	Description	Color	Unit
91101	VT601		1 box
91121	VT602		1 box
82301	VT601-TOP (G)	Green	1 box
82302	VT601-TOP (R)	Red	1 box
82303	VT601-TOP (W)	White	1 box
82304	VT601-TOP (B)	Blue	1 box
82305	VT601-TOP (Y)	Yellow	1 box
82321	VT602-KIT		1 box
91171	VT801		1 box
91182	VT802		1 box

\* VT801 and VT802 are only available in limited countries.

## COOLING RACK

Liquid Nitrogen container for vitrification. Stainless Container interior which allows sterilization before use is also available.



## REPRO PLATE

Exclusively designed to follow the vitrification protocol with ease; offers a slot to support the Cryotop® and Cryotop®CL.



## QUALITY CONTROL

- Endotoxin  $\leq 0.5\text{EU} / \text{device}$
- Mouse Embryo Assay (One Cell)  $\geq 80\%$
- Appearance



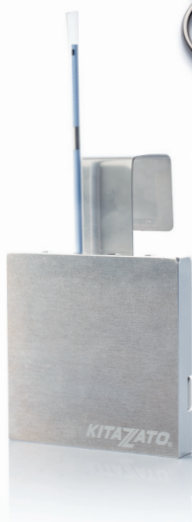
## HEAT SEALER

With a rapid application, it allows the easy sealing of the external straw of the Cryotop® CL.



## STRAW CUTTER

Optimal design for cutting the external straw of the Cryotop® CL.



## ALUMINUM BLOCK CL

Block of aluminum with preset position; guarantees success in the insertion and sealing process as well as the effective extraction of the Cryotop®CL from the straw during warming.

Order number	Description	Unit
84010	Cooling Rack (S)	2pcs/set
84014	Cooling Rack (L)	1
94120	Stainless Container for Cooling Rack (S)	1
94121	Stainless Container for Cooling Rack (L)	1
94122	Set of Cooling Rack & Stainless Container (S)	1
94123	Set of Cooling Rack & Stainless Container (L)	1
84122	Aluminum Block CL	1
84117	Straw Cutter	1
84121	Sealer (Plug A)	1
84119	Sealer (Plug C)	1
83006	Repro Plate-K1 (6well)	10pcs/pack
83007	Repro Plate-K1 (6well) individually packed	50pcs/pack
83010	Repro Plate-K1 (3well)	10pcs/pack
83011	Repro Plate-K1 (3well) individually packed	50pcs/pack

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Rodríguez-Purata J., *Reproductive outcome is optimized by genomic embryo screening, vitrification, and subsequent transfer into a prepared synchronous endometrium.* Journal Assisted Reproduction Genetics, 2016.

## DEFERRED EMBRYO TRANSFER

Roy T.K., *Single-embryo transfer of vitrified-warmed blastocysts yields equivalent live-birth rates and improved neonatal outcomes compared with fresh transfers.* Fertility & Sterility, 2014.

## FREEZE ALL

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Weinerman R., *Why we should transfer frozen instead of fresh embryos: the translational rationale.* Fertility & Sterility, 2014.



# KITAZATO CORPORATION



Kitazato is a development-oriented manufacturer of products for Assisted Reproduction Technologies.

## **CORPORATE IDEAL**

As a development-oriented manufacturer of life science products, Kitazato Corporation aims to contribute to the health and happiness of people around the world and bring together the passion and wisdom of all our employees in pursuance of this end.

## **CORPORATE VISION: “CREATING NEW WORLD-CLASS VALUES”**

Corporate Mission: We strive to see things from our customers’ perspective. We think with them, learn with them, and create new world-class values.

## **CORPORATE OBJECTIVE: “SUPPORTING THE HEALTH AND HAPPINESS OF PEOPLE”**

Our goal is to contribute to the development of medicine and biotechnology, and we will make every effort to realize the hopes of people around the world for healthy living and a happy life.



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