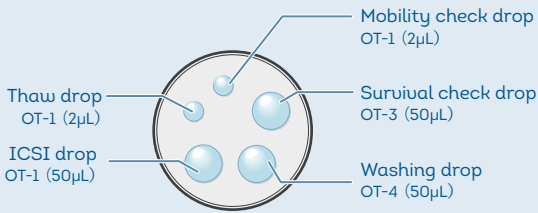




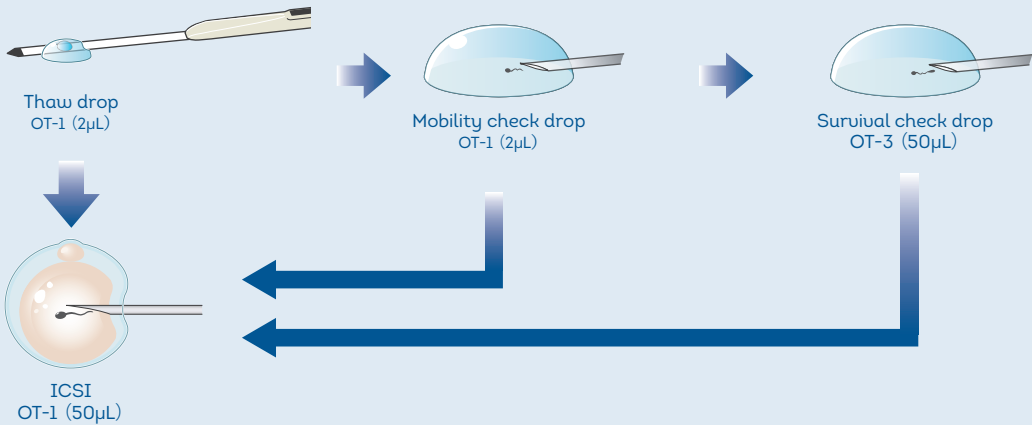
Thawing of Low-count Sperm

**01** Prepare the dish for sperm thawing and ICSI using the Oligospermia Thawing Kit, as shown on the right. Warm the dish at a 37°C for at least 30 minutes.



**02** Take out Cryotop® from LN and air-thaw for 5 seconds. Immerse the tip of Cryotop® in the Thaw drop (OT-1) on the dish. If sperm motility is confirmed, perform ICSI immediately.

- If sperm are immotile:  
 Check the motility in the Mobility check drop (OT-1). Perform ICSI after confirmation of sperm motility.
- If sperm remained immotile in the Mobility check drop:  
 Check the viability in the Survival check drop (viable sperm exhibit swelling of the sperm tail by Hypo-osmotic swelling Test, HOST). Perform ICSI after confirmation of sperm motility.



RELATED PRODUCTS

REF	Product Name	Contents
84030	Sperm Freeze Board and Liquid Nitrogen Container	1 set / box

REF	Product Name	Contents
84012	Blue Box (small)	1 pcs / box

REF	Code	Contents
71410	MT-TESE30	10 pcs / box

REF	Code	Contents
84021	SF-FRBD	2pcs / box

REF	Code	Contents
81111	Cryotop® - G	10 pcs / pack
81112	Cryotop® - R	10 pcs / pack
81113	Cryotop® - W	10 pcs / pack
81114	Cryotop® - B	10 pcs / pack
81115	Cryotop® - Y	10 pcs / pack

Specification may change without pre-notice for purpose of product improvement.

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PRODUCT CATALOGUE

# Oligospermia Cryopreservation



Quality Results  
for Life

- Kit for cryopreservation and thawing of low-count sperm using Cryotop®.
- The cryoprotectant in the kit is sucrose, and it does not contain glycerol.
- The assessment of sperm motility and viability can be conducted soon after thawing.
- Cryotop® is available for individual purchase in packs of 10 pieces (REF. 81111, 81112, 81113, 81114, 81115).

**Collaborative Development** : Dr. Atsushi Tanaka / St. Mother Hospital Infertility Clinic

REF	Code	Contents	
92231	Oligospermia Cryo Kit	Cryotop® (white)	2 pcs
		OC-1 (Collagenase)	0.5 mL×1
		OC-2 (Sperm Medium)	0.5 mL×1
		OC-3 (Sperm Freeze (SF4))	0.5 mL×1
92232	Oligospermia Thawing Kit	OT-1 (Sperm Medium)	0.5 mL×1
		OT-2 (Pentoxifylline)	0.5 mL×1
		OT-3 (HOST Solution)	0.5 mL×1
		OT-4 (PVP3%)	0.5 mL×1

COMPONENTS

Calcium Chloride / Collagenase / Gentamicin / Glucose /  
HEPES / Human serum albumin / Magnesium sulfate /  
Pentoxifylline / Polyvinylpyrrolidone / Potassium chloride /  
Potassium phosphate / Sodium bicarbonate / Sodium chloride /  
Sodium lactate / Sodium pyruvate / Sucrose

QUALITY CONTROL

**OC-1 / OC-2 / OC-3 /  
OT-1 / OT-2 / OT-3 / OT-4**  
pH 7.2-7.6 / Osmolarity / Endotoxin <0.25EU/mL / Sterility Test / Sperm Survival (24h) ≥80% /  
Sperm Penetration Assay ≥3  
**Storage : 2-8°C**  
**Shelf Life : 6 months**

**Cryotop® (white)**  
Sterility Test / Endotoxin ≤0.5EU/device / Mouse Embryo Assay ≥80% /  
Appearance and cleanliness / Tensile test for the sheet part ≥5N / Sterilized  
**Shelf Life : 3 years**

RESULT

Classified Spermatozoa	No. of patient	No. of ET cycle	Sperm colleted rate ※1	Sperm surviual rate ※2	fertilization rate (N)	Average number of embryos transferred (min-max)	Average number of frozen embryos (min-max)
Frozen ejaculated spermatozoa	28	60	97.8% [510/521]	87.1% [444/510]a	52.7% [224/425]b	1.52 (1-2)	0.72 (0-1)
Frozen TESE spermatozoa	20	18	92.7% [152/164]	60.5% [92/152]a'	37.2% [29/78]b'	1.73 (1-2)	0.53 (0-1)
Fresh ejaculated spermatozoa	31	107	No data	No data	52.2% [302/579]	1.41 (1-2)	1.83 (0-4)

a-a' and b-b' P<0.05 (Chi-square test)  
※1 collected sperm / warmed sperm      ※2 surviued sperm / collected sperm  
Data from St. Mother Hospital Infertility Clinic

REFERENCE

○ Endo et al. Clinical and neonatal outcomes of individually vitrified human sperm with Cryotop and Cell Sleeper. Cryobiology. 2022 Oct;108:78-81.

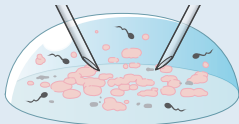


The video protocol is available here.

PROTOCOL

Collection and Freezing of Low-count Sperm

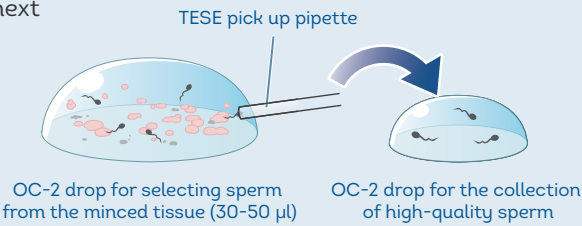
**01** Make a drop of OC-1 (Collagenase) onto the glass bottom and apply the collected seminiferous tubules into the drop. Finely mince the seminiferous tubules into small pieces using a 27G injection needle.  
\*Proceed directly to Step **02** for ejaculated sperm.



OC-1 for mincing seminiferous tubules (30-50 µl)

**02** Prepare two drops of OC-2 (Sperm Medium), One is for selecting sperm from the minced tissue (30-50 µl) and the other is a drop designated for sperm collection (1 µl). Cover the drops with Hypure® Oil and warm the dish for 30 minutes in a 37°C incubater. Transfer the sperm from the OC-1 drop to the OC-2 to select the high-quality sperm. It is advisable to adjust the size and shape of the drop to facilitate the collection of sperm using microtools.

**03** The high-quality sperm is collected in the OC-2 drop for the next procedure.

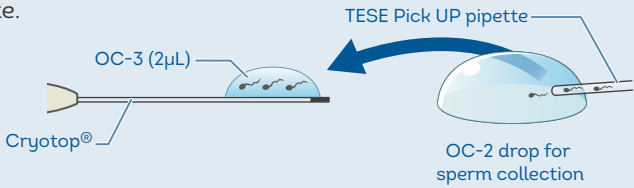


**04** Position the Cryotop® under an inverted microscope and apply a 2 µL drop of OC-3 (Sperm Freeze), Prepared to room temperature (20-25°C).

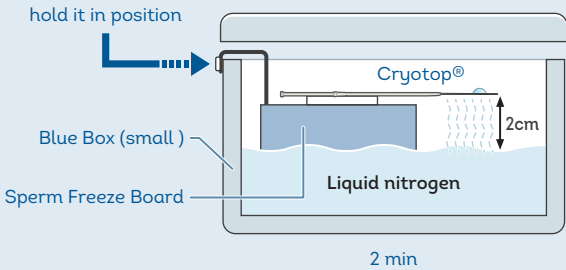


**05** Fill the Blue Box for Sperm (REF. 84012) with liquid nitrogen (LN), and float a Sperm Freeze Board (REF. 84021).

**06** Collect the sperm from the OC-2 drop from its tail-side to the OC-3 drop on the Cryotop®, using a TESE Pick Up pipette.



**07** Immediately place the Cryotop® on a Sperm Freeze Board (REF. 84021) and expose it to the vapor of LN (2 cm from the liquid surface) for 2 minutes to freeze.



**08** After 2 minutes, immerse the Cryotop® into LN, cap it with its cover straw and store in a tank.