Cryo Bio System
Groupe I.M.V. Technologies

Assisted Reproductive Technologies

www.cryobiosystem.com

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Founded in 1987, Cryo Bio System is a division of IMV Technologies, the world leader in animal reproduction biotechnologies, based in L'Aigle, Normandy - France.

Cryo Bio System is exclusively dedicated to human life sciences and biodiversity.

Combined with IMV Technologies Group's expertise in cryopreservation of biological samples, Cryo Bio System provides innovative solutions to the scientific community through a range of High Security storage products for biorepositories, biobanks and biological resources centres in various fields and applications:

- Cancer research, epidemiological studies
- Blood transfusion haemovigilance
- Regenerative medicine: cell and genetic therapy, stem cells
- Genomics, proteomics
- Medical and pharmaceutical research
- Medico-legal storage
- Military medicine
- Biodiversity: animal and vegetal germplasm conservation
- Assisted Reproductive Technologies (ART).

Our international presence through subsidiaries (Italy, Netherlands, United States, China and India), and a network of distributors in over 60 countries offers customers both high quality products and expert technical support.

This catalog demonstrates our commitment to the Assisted Reproductive Technologies (ART) field with a complete product line that meets, in particular, all requirements of cryopreservation.

The solutions we have designed for humans make it possible to deep-freeze sperm, embryos, ovarian cortex, as well as to vitrify oocytes and embryos at various stages. We also have developed the unique concept of long-term high-security cryopreservation, an essential guarantee of storage safety and quality for all samples.

CONTENTS

Recisperme SPERM COLLECTION VESSEL

007426 Pack of 20 Recisperme

DESCRIPTION / USE

Spermogram, sperm culture, spermocytogram (insemination, in vitro fertilization, diagnosis).

Sterilized by irradiation.

Individually packaged in box of 20 units.

TECHNICAL SPECIFICATIONS

The innovative design of the Cryo Bio System Recisperme allows sperm to be collected directly into a round bottom tube, eliminating the need for sample transfer and enhancing sample quality by avoiding tricky handling.

Furthermore, thanks to a graduated tube inside the device the sperm volume can be accurately read (contents 10 mL).

Preassembled sterile unit comprised of:

- a funnel-shaped upper part;
- a graduated 10 mL tube with a round base and blue stopper;
- a support; and
- an adhesive cover.

INSTRUCTIONS FOR USE

- After ejaculation directly into the vessel, the graduated tube is held in place to facilitate flow;
- The adhesive cover can be put on to guarantee that the sample remains sterile;
- Then the funnel is removed to avoid potential contamination, and the tube is closed with the stopper and sent to the laboratory for analysis.

SHELF-LIFE

Three years from date of manufacture.

Isolating transport container

015937 Bag of 5 isolating transport containers

DESCRIPTION / USE

For transportation of prepared sperm prior to intra-uterine insemination.

High density Polyethylene container with Polyurethane foam insert precut to hold one tube.

All commercially available 5 to 15 mL round or conical bottom culture tubes fit the size of the precut holder.

TECHNICAL SPECIFICATIONS

Length: 120 mm
Diameter: 65 mm.

Two hours prior to use, the container can be placed at 37°C. This ensures that tubes filled with prepared sperm are at an optimal temperature for transportation from the laboratory to the clinic where the insemination will be performed, guaranteeing sperm mobility by preventing thermal shock.

Guarantees sperm mobility by avoiding thermal shock.

INSTRUCTIONS FOR USE

- Open the container by pulling up the lid;
- Place the tube into the opening situated in the middle of the foam insert;
- Close the container by putting the lid back on.

The container is now ready to be transported to the clinic for insemination.

If necessary, the container can be labeled for identification.

Maximum duration of transportation: 15 minutes.

Makler® counting chamber

DESCRIPTION / USE

Rapid sperm analysis.

Counting chamber and cover glass for counting and analysis of spermatozoa.

TECHNICAL SPECIFICATIONS

Reusable: easily cleaned with a non-bleach disinfectant solution. The depth of 10 microns eliminates blurring and allows sperm to move freely. The applied sample is observed in one focal plane.

A 1 mm² grid, subdivided into 100 squares, each one of 0.1 x 0.1 mm, is on the cover glass, eliminating the need for insertion and removal of a grid into the microscope eye.

INSTRUCTIONS FOR USE

Easy-to-use: sperm count performed on undiluted specimen.

The number of spermatozoa counted in any strip of 10 squares of the grid indicates their concentration in millions/mL.

No additional factors are necessary for calculation.

Observation of color fringes at the four contact points, provides a self-controlled test for accuracy. The cover glass can never be raised by the applied sample.

Repeated use is possible with complete accuracy and without further calibration.

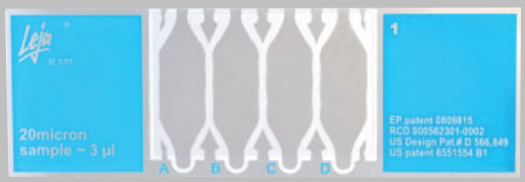
016261 Makler® counting chamber (complete with cover galss and grid)

016262 Extra cover glass with grid

LEJA counting chamber

019319 Box of 25 disposable Leja slides – 2 chambers

019320 Box of 25 disposable Leja slides – 4 chambers



DESCRIPTION / USE

High quality disposable counting chambers for semen analysis. Due to their special characteristics, Leja slides will both save time and increase the level of accuracy and precision of semen analysis.

All slides are covered with a special coating to prevent air bubble formation and to prevent semen from sticking to the chamber surface. The resin and ink used are both non-toxic.

The Leja slides have an excellent low limit of quantification and can handle high sperm concentrations. This has a direct clinical impact: you will be better prepared to determine the thresholds for the various modalities of Assisted Reproduction Technologies (waiting for natural conception, intrauterine insemination, in-vitro fertilization or intracytoplasmic sperm injection) and to decide which treatment is optimal for a couple.

The high level of accuracy and precision of the Leja chambers will allow your results to be compared with other laboratories' scientific data concerning the relationship between semen parameters (concentration, motility, viscosity) and fertility.

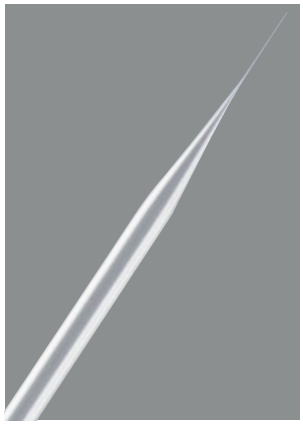
TECHNICAL SPECIFICATIONS

Slides with 2 or 4 chambers
Depth: 20 microns

ICSI, holding and biopsy pipettes

ICSI pipettes

022166	ICSI pipette – angle 20°	**10**
022167	ICSI pipette – angle 30°	**10**



DESCRIPTION / USE

ICSI injection pipettes are used to perform intra-cytoplasmic sperm injection (ICSI).

TECHNICAL SPECIFICATIONS

The unique shape and taper of our ICSI pipettes provide for smooth movement of its content. A few sperm can be loaded for injecting a few oocytes at one time. The short and sharp fine spike at the tip allows for easy, and non- traumatizing penetration of the oocyte.

The 50V series is our classic design with an internal diameter of 5 µm, a spiked tip bevelled at 30°. They are supplied with an angle of 20° or 30° with a tip to elbow length of 550 µm.

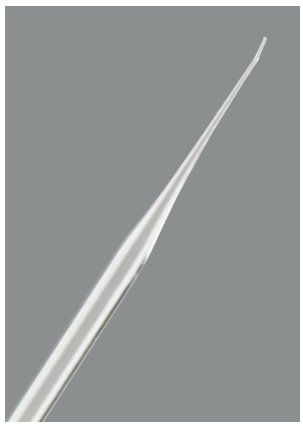
Individually packaged in box of 10 units.

SHELF-LIFE

Three years from date of manufacture.

Holding pipettes

022168	Holding pipette – outer diameter 100 µm – angle 20°	**10**
022169	Holding pipette – outer diameter 100 µm – angle 30°	**10**
022170	Holding pipette – outer diameter 120 µm – angle 20°	**10**
022171	Holding pipette – outer diameter 120 µm – angle 30°	**10**



DESCRIPTION / USE

Holding pipettes are used to hold an oocyte or an embryo in position during ICSI and other micro-manipulation procedures.

TECHNICAL SPECIFICATIONS

The classic series has an internal diameter of 20 µm and an outer diameter of 100 µm or 120 µm.

All our holding pipettes are supplied with a tip angle of 20° or 30° with a tip to elbow length of 650 µm.

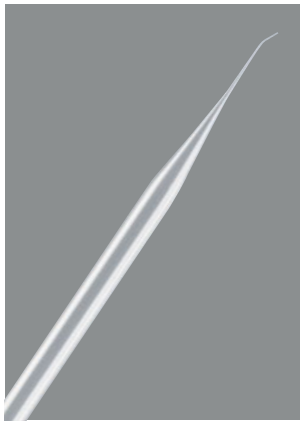
Individually packaged in box of 10 units.

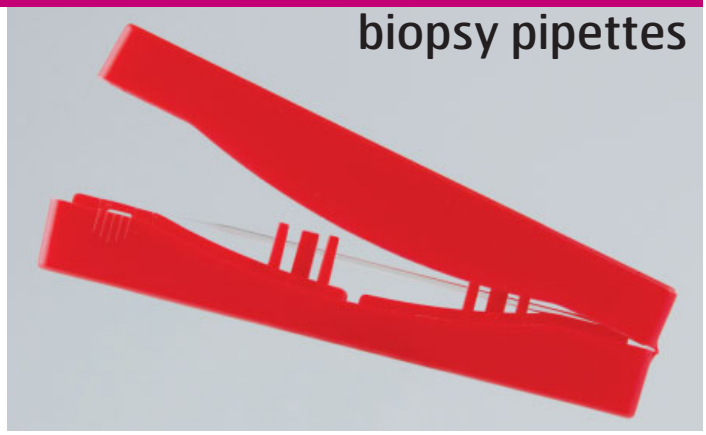
SHELF-LIFE

Three years from date of manufacture.

Blastomere biopsy pipettes

022172	Pipette for blastomere biopsy – angle 30°	**10**





DESCRIPTION / USE

Blastomere biopsy pipettes are designed to remove blastomeres from embryos for preim-plantation genetic diagnosis (PGD).

TECHNICAL SPECIFICATIONS

They are supplied with a tip angle of 30° and a tip to elbow length of 550 µm.

Individually packaged in box of 10 units.

SHELF-LIFE

Three years from date of manufacture.

Aspiglaire

ENDOCERVICAL ASPIRATOR FOR HÜHNER TEST

CE marked

DESCRIPTION / USE

Hühner test (post-coital sample collection).

Mucus viscosity evaluations.

Endo- or exocervical mucus sampling.

Sterilized by irradiation.

Individually packaged in quantities of 1 or 5 units in box of 20 or 40 units.

TECHNICAL SPECIFICATIONS

The Aspiglaire catheter has two components:

- a clear, flexible sheath with a round tip; and
- an inner blue plunger.

No syringe needed.

Length: 280 mm
External diameter: 2.92 mm

INSTRUCTIONS FOR USE

- Slowly insert the catheter into the cervical canal until reaching the endocervical sampling site;
- Aspirate the cervical mucus by pulling the plunger which automatically stays in the desired position to allow the mucus to be drawn into the tube;
- Gently remove the catheter from the cervix;
- Apply the sample on a slide for examination.

SHELF-LIFE

Three years from date of manufacture.

007447 Box of 20 Aspiglaire (individually packaged)
007448 Box of 40 Aspiglaire (8 cells containing 5 units)

Rocket Craft™ Pump

CE marked

005553 **Rocket Craft™ pump - Vacuum pump for oocyte recovery**
015621 Pedal for Craft™ pump
006553 Craft™ pump tubing
018204 Craft™ pump overflow reservoir
018268 Specific cap for Craft™ pump reservoir
019270 Luer-Lock tubing adaptor for Craft™ pump tubing

DESCRIPTION / USE

Oocyte aspiration.

The Craft™ pump is specifically designed to provide a smooth low volume vacuum at a pre-determined negative pressure.

12-month warranty.

TECHNICAL SPECIFICATIONS

Vacuum is activated by a foot operated switch controlled by the surgeon performing oocyte collection.

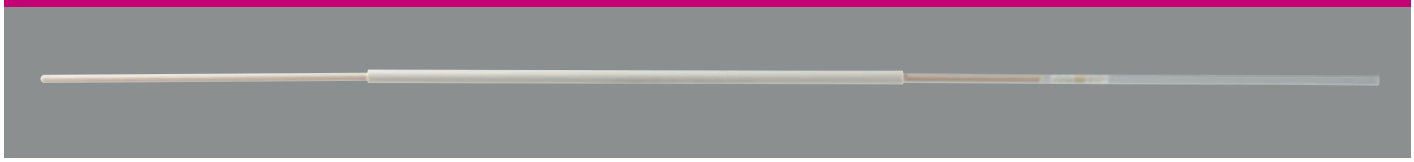
Dimensions: 20 x 14 x 12 cm
Weight: 3.2 kg
Vacuum: 0 - 400 mm Hg

Intracervical insemination catheter

FOR CBS™ HIGH SECURITY SPERM STRAWS

CE marked

015821 Box of 20 sterile ICI catheters for CBS™ High Security sperm straws



DESCRIPTION / USE

Artificial intracervical insemination with thawed sperm.

For use with CB™ 0.3 and 0.5 mL straws.

Sterilized by irradiation.

Individually packaged in box of 20 units.

TECHNICAL SPECIFICATIONS

The intracervical insemination catheter consists of 3 parts:

- a flexible PVC outer sheath with safety sleeve.
  Length: 24.8 cm
  Internal diameter: 3.7 mm
  External diameter: 4.1 mm
- a white PETG guide to position the straw in the outer sheath.
  Length: 13 cm
  Internal diameter: 2.5 mm
  External diameter: 3.1 mm
- and a white PETG plunger to expel the contents of the straw.
  Length: 28 cm
  External diameter: 1.5 mm

INSTRUCTIONS FOR USE

- Thaw the straw and release the safety plug by pinching it between finger and thumb;
- Decontaminate the straw with a bactericidal agent;
- Cut of the seal at the plug side of the straw;
- Place the straw in the clear sheath, sample side first;
- Make sure the opening of the straw is correctly positioned in the sheath;
- Introduce the catheter into the cervical canal and insert the plunger inside the guide;
- Gently push away the plug of the straw and inject the sperm very slowly.

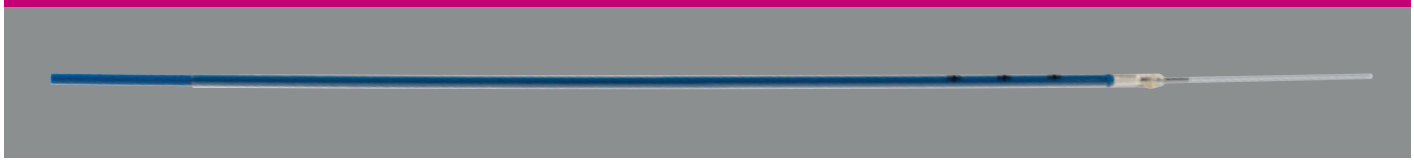
SHELF-LIFE

Three years from date of manufacture.

Intra-uterine insemination catheter with plunger

CE marked

007446 Box of 20 sterile IUI catheters with plunger



DESCRIPTION / USE

Intra-uterine insemination with processed sperm.

Sterilized by irradiation.

Individually packaged in box of 20 units.

TECHNICAL SPECIFICATIONS

The intra-uterine insemination catheter consists of 2 parts:

- a clear flexible PVC sheath equipped with
- a thin and flexible cannula with a soft tip for easy entry into the uterine cavity.

No syringe needed.

A plastic plug guarantees sterility when the processed sperm must be transported to the clinic prior to insemination.

Length: 28 cm
External diameter: 3 mm
External diameter of the tip: 1 mm

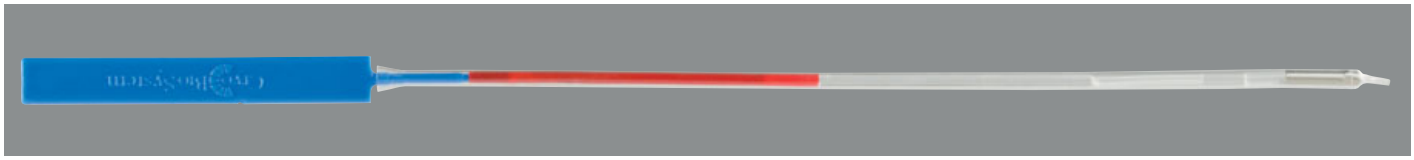
INSTRUCTIONS FOR USE

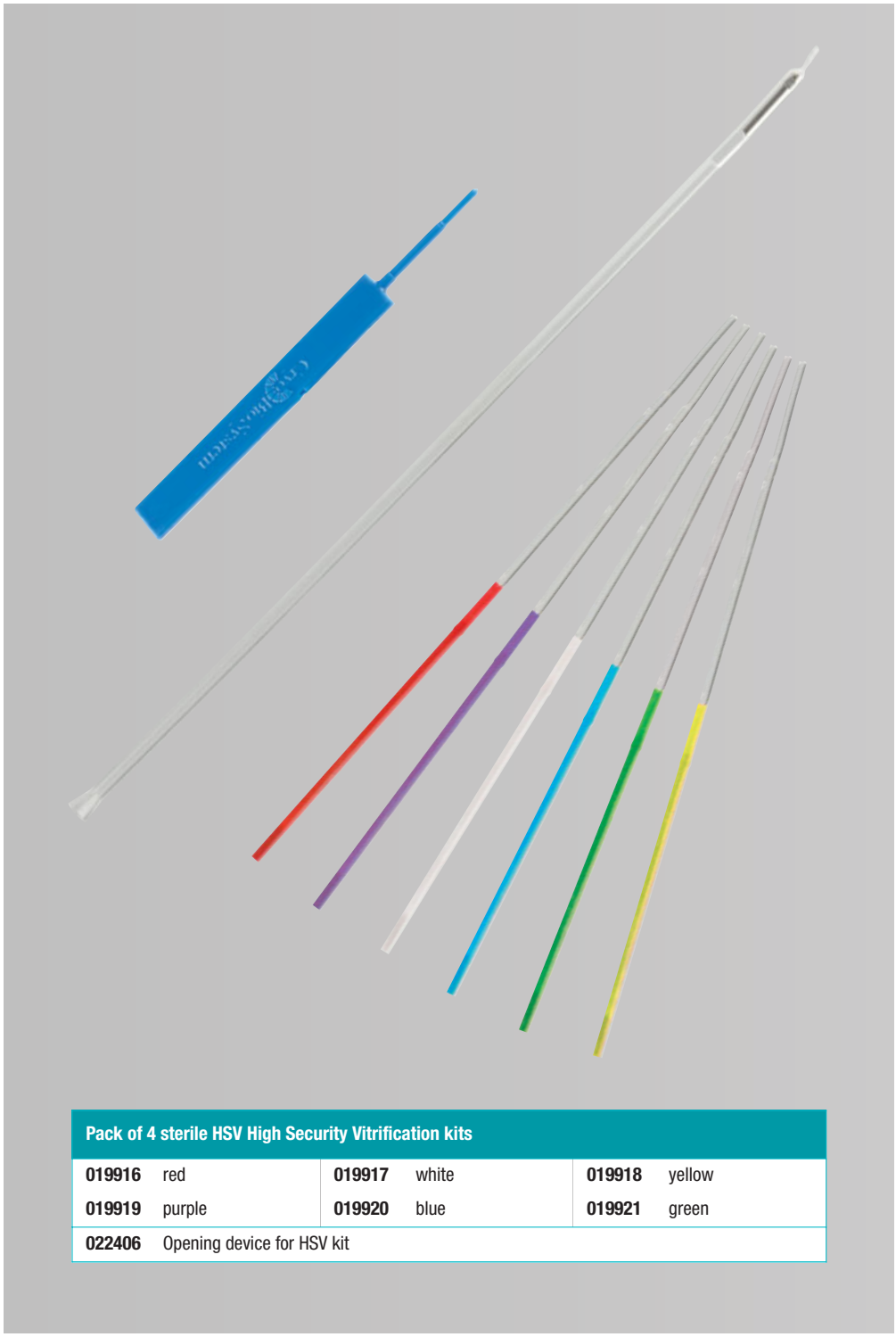
- Pull on the plunger to draw the required volume of sperm into the catheter;
- Insert a speculum;
- Introduce the catheter into the cervical canal, then through the internal cervical orifice;
- Slowly inject the sperm into the uterine cavity;
- Keep the patient lying down for a few minutes.

SHELF-LIFE

Three years from date of manufacture.

HSV High Security Vitrification kit





Pack of 4 sterile HSV High Security Vitrification kits					
019916	red	**019917**	white	**019918**	yellow
019919	purple	**019920**	blue	**019921**	green
022406	Opening device for HSV kit				

DESCRIPTION / USE

Vitrification of oocytes and embryos.

The HSV High Security Vitrification kit is comprised of 3 parts:

- a High Security ionomeric resin straw;
- a capillary tube with a pre-formed gutter attached to a colored handling rod; and
- a blue plastic insertion device.

Sterilized by irradiation.

Packaged in a peel off blister pack (4 kits).

IDENTIFICATION

The HSV kit can be labeled using LN2 resistant labels.

FILLING AND SEALING

- Prepare the identification label (liquid nitrogen resistant) for the HSV straw and apply it approximately 20 mm (0.8 inch) from the flared end of the straw;
- Connect the end of the blue plastic insertion device to the colored end of the handling rod;
- Prepare the sample for vitrification according to laboratory protocol;
- Using a micro-pipette, carefully deposit the sample into the gutter one millimeter from the end. The drop holding the sample must be under 0.5 µL. Maximum of 2 oocytes or embryos. In this case, use a droplet by sample;
- Immediately place the pre-formed gutter with handling rod in the flared end of the straw. Push until the rectangular portion of the blue handler comes into contact with the flared end of the straw;
- Slightly pinch the straw between your thumb and finger and remove the insertion device;
- While still holding the straw in place, seal the open end using a SYMS sealer;
- Hold the straw using tweezers in the area of the handling rod;
- Quickly plunge the entire straw into liquid nitrogen vertically;
- Gently stir the straw in liquid nitrogen for a few seconds so as to avoid formation of an isolating air bubble layer around the straw.

CE marked
FDA 510(k) premarket notification clearance # K092398
for 4-8 cell and blastocyst stage embryos

STORAGE IN LIQUID NITROGEN

Cryo Bio System carries a line of accessories for storage and management of HSV kits in liquid nitrogen.

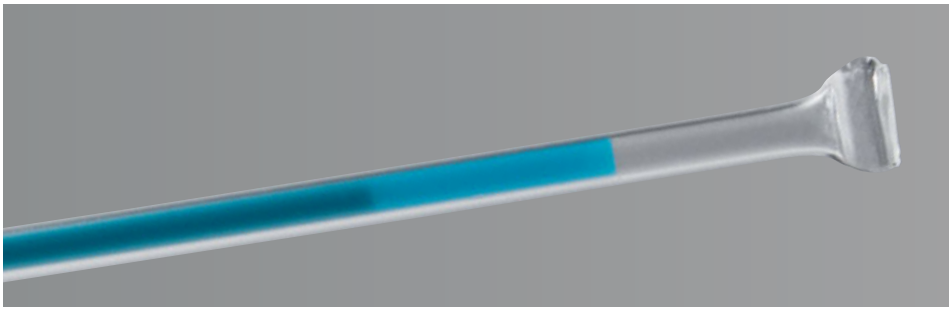
THAWING

Thawing of the specimen should be done in a controlled environment, such as a laminar flow hood.

- Prepare the thawing / dilution media;
- Identify the HSV straw;
- Transfer the straw from the storage container to a transport dewar filled with liquid nitrogen;
- Lift the straw enough to expose the colored handling rod. Make sure the end with the sample remains immersed in the liquid nitrogen;
- While holding the straw, use the opening device for HSV kit to section the straw;
- Immediately (within 2 seconds), plunge the gutter into the first dilution media.

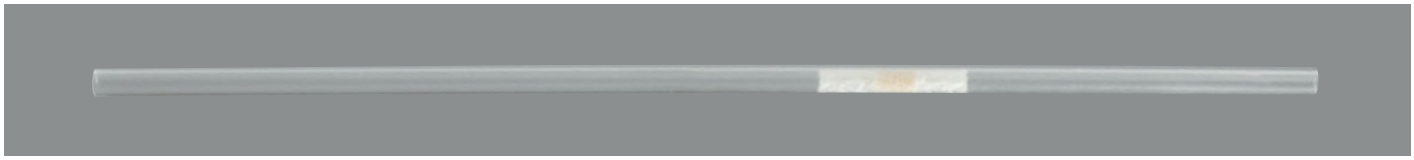
SHELF-LIFE

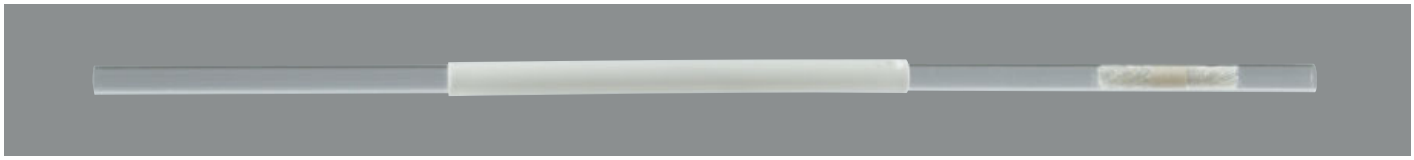
Three years from date of manufacture.

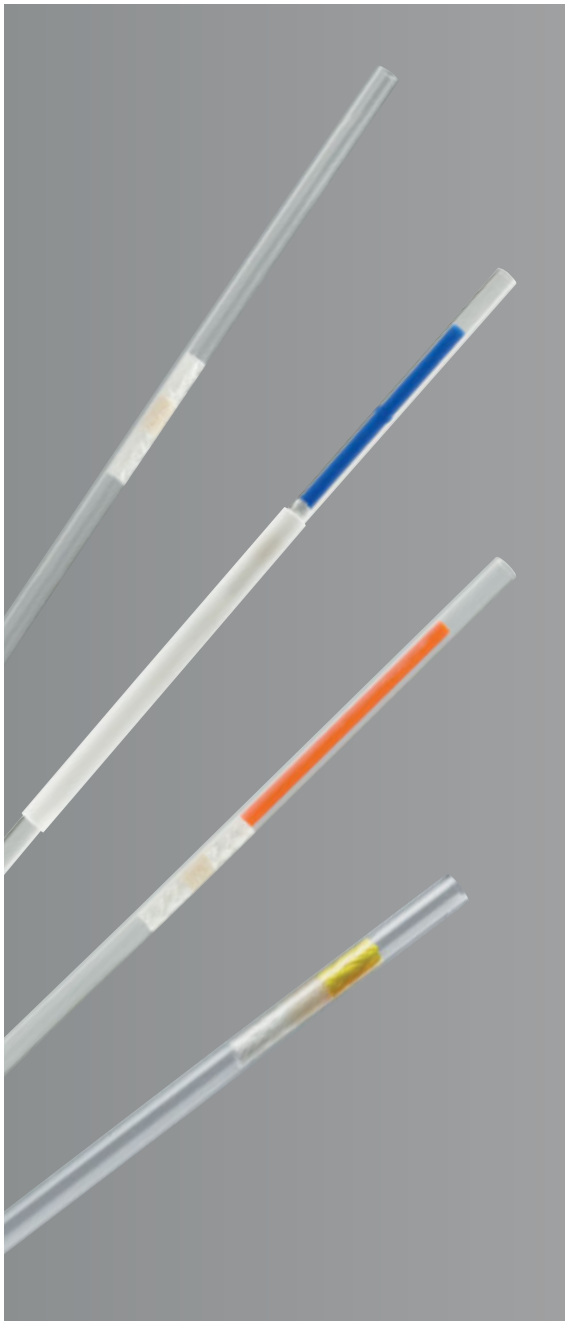


Opening device for HSV kit

CBS™ High Security cotton-plugged sperm straws







DESCRIPTION / USE

Storage and preservation of sperm.

The special design and the mode of filling and sealing of CBS™ High Security straws for cryopreservation of human biological samples makes them fully hermetic, especially in liquid nitrogen.

Manufactured from biocompatible materials, they are used in medically assisted procreation techniques and particularly for sperm preservation. The CBS™ straw is a clear, flexible tube made of ionomeric resin.

Length: 133 mm
Internal diameter: 2.25 mm

Sterilized by irradiation.

Model CBS™ 0.3 mL

This straw is composed of two distinct parts separated by a sliding white cotton safety plug. The first part with a working volume of 0.3 mL holds the sperm sample, while the second permits introduction of a colored identification tube and serves as a handle in liquid nitrogen.

Model CBS™ 0.5 mL

Same technical specifications as the 0.3 mL straw, except that the working volume is 0.5 mL, and the outer part of the cotton safety plug is colored.

IDENTIFICATION

The CBS™ 0.3 mL and 0.5 mL straws carry tamper-proof barcode and/or alphanumeric identification on an outer jacket that can be removed after thawing, guaranteeing sample traceability.

FILLING AND SEALING

Straws are filled individually by means of a yellow sterile nozzle and a micro-aspirator.

The impermeability of the seal is only guaranteed if the CBS™ straws are sealed with the SYMS or SYMS II sealing systems.

For large series (sperm banks), the CBS™ straws are filled and sealed on an automatic machine (PACE) or on an automatic filling, sealing and printing machine (MAPI).

STORAGE IN LIQUID NITROGEN

Cryo Bio System carries a line of accessories for storage and management of CBS™ straws in liquid nitrogen.

RECOMMENDATIONS FOR THAWING CBS™ STRAWS

After verifying the location of the desired straw, its identification is confirmed by the color of the internal identification tube (CBS™ 0.3 mL), its plug (CBS™ 0.5 mL) and/or its outer jacket.

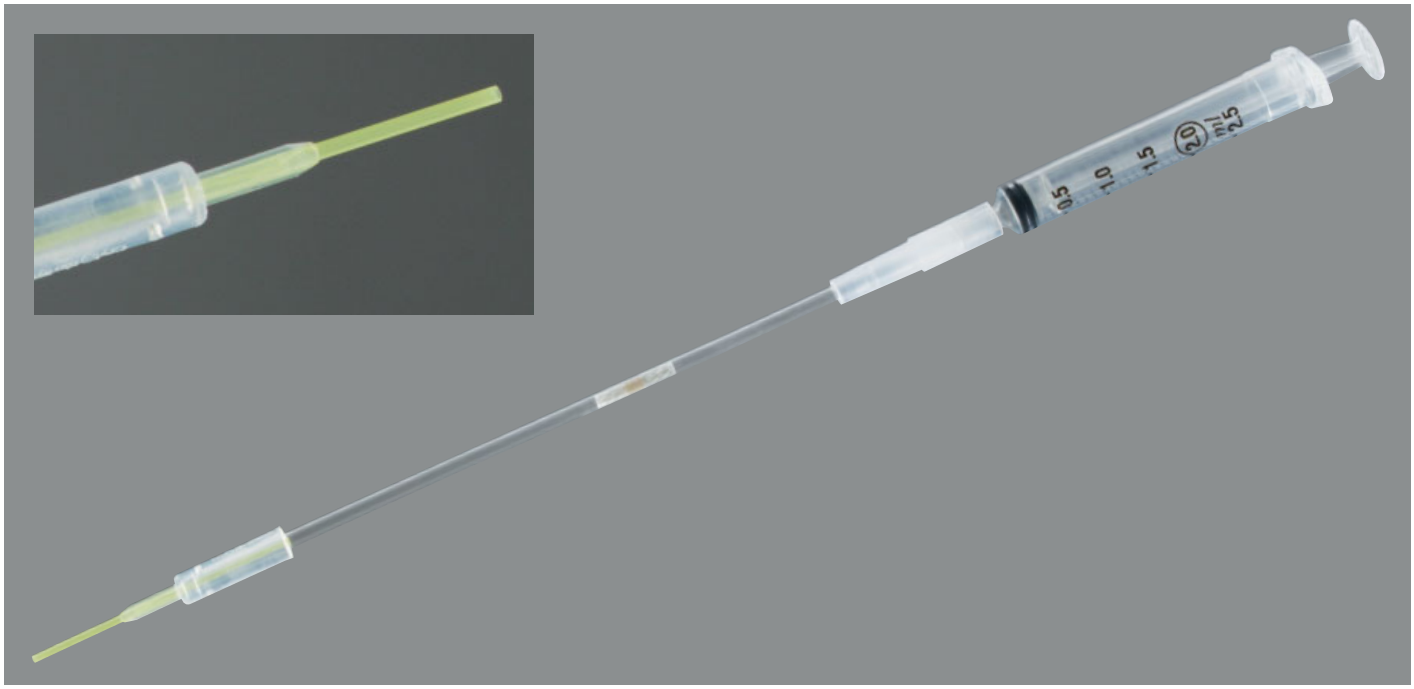
The straw is gently removed from the storage visotube, taking care to keep the part containing the sperm in liquid nitrogen. Once it is checked, the straw is reheated by placing it in warm water (maximum 37°C) for a few seconds. After drying, it is ready to use.

SHELF-LIFE

Three years from date of manufacture.

CE marked
FDA 510(k) premarket notification clearance # K002595

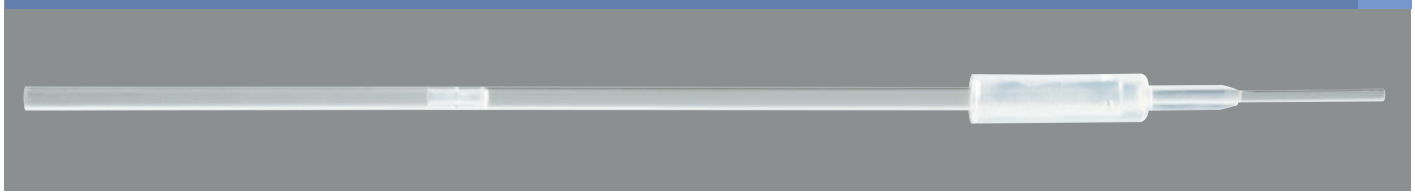
010287	**CBS™ High Security sperm straw 0.3 mL with white cotton plug***					**20**
010288						**100**
CBS™ High Security sperm straw 0.3 mL with white jacket and colored fixed rod						**75**
017797	red	**017798**	white	**017799**	yellow	
017800	blue	**017801**	green	**017802**	purple	
014651	**CBS™ High Security sperm straw 0.5 mL with white cotton plug***					**20**
014650						**100**
CBS™ High Security sperm straw 0.5 mL with colored cotton plug*						**100**
016584	red	**016611**	yellow	**016612**	green	
016613	blue	**016614**	orange	**016615**	grey	
008656	Bag of 10 sterile yellow filling nozzles					
Bag of 10 weighted identification rods 30 mm						
019021	yellow	**019022**	green	**019023**	blue	
019024	orange	**019025**	white	**019026**	red	
Identification jacket						**50**
010272	red	**010273**	white	**010274**	orange	
010275	green	**010276**	blue	**010277**	yellow	
014939	clear					
014175	Set of 2 indelible black markers					**4**
016730	Sterile connection tubing for syringe (individually packaged)					**1**
016731	Sterile connection tubing for syringe (packaged by 5)					**5**
010284	Sterile emptying device					**20**



CBS™ High Security hydrophobic plugged embryo straw

CE marked
FDA 510(k) premarket notification clearance # K002595

010286	**CBS™ High Security embryo straw with hydrophobic plug and clear filling nozzle preconnected**	**20**



DESCRIPTION / USE

Storage and preservation of embryos.

The special design and the mode of filling and sealing of CBS™ High Security straws for cryopreservation of human biological samples makes them fully hermetic, in ultra low temperatures.

Manufactured from biocompatible materials, they are used in medically assisted procreation techniques and particularly for embryo preservation. The CBS™ embryo straw is a clear, flexible tube made of ionomeric resin.

Length: 133 mm
Internal diameter: 2.25 mm

Its disposable, clear filling tip allows introduction of the embryo without contaminating the opening.

Two distinct parts separated by a hydrophobic plug guarantee embryo sterility during introduction and recovery after thawing.

The first part holds the embryo and the adjacent dilution solvent (working volume 0.3 mL), while the second part allows insertion of a colored identification rod which also facilitates easy identification in liquid nitrogen.

Sterilized by irradiation.

Individually packaged in blister of 20 units.

IDENTIFICATION

The CBS™ High Security embryo straw carries a tamper-proof colored identification rod to guarantee sample traceability.

FILLING AND SEALING

The CBS™ High Security embryo straw is filled by aspiration using a micro-aspirator according to a specific protocol.

The impermeability of the seal is only guaranteed if the CBS™ straws are sealed with the SYMS or SYMS II sealing systems.

STORAGE IN LIQUID NITROGEN

Cryo Bio System carries a line of accessories for storage and management of CBS™ straws in liquid nitrogen.

RECOMMENDATIONS FOR THAWING CBS™ STRAWS

After verifying the location of the desired straw, its identification is confirmed by the color of the identification rod.

SHELF-LIFE

Three years from date of manufacture.

Weighted identification rod 40 mm					10
010266	yellow	**010267**	green	**010268**	blue
010269	orange	**010270**	white	**010271**	red

CBS™ High Security unplugged tissue 2 mL straws

CE marked

018960 CBS™ High Security tissue 2 mL straw **20**

DESCRIPTION / USE

Cryopreservation of tissue fragments.

Sterilized by irradiation.

Individually packaged in blister of 20 units.

IDENTIFICATION

The CBS™ High Security tissue straws can be identified by using LN2 resistant labels.

FILLING AND SEALING

Filling and sealing of the straw should be done in a controlled environment, such as a laminar flow hood.

- Prepare the identification label and apply it on the outside of the CBS™ High Security tissue 2 mL straw;
- Holding the straw near the jaws, seal one extremity of the straw with the sealer SYMS equipped with the special guide for CBS™ High Security tissue 2 mL straws or SYMS II;
- Using a tong, carefully deposit the tissue fragment(s) into the straw, according to laboratory protocol (fragments or wrapped pieces);
- Holding the straw near the jaws, seal the other extremity of the straw with the SYMS or SYMS II sealing systems.

STORAGE IN LIQUID NITROGEN

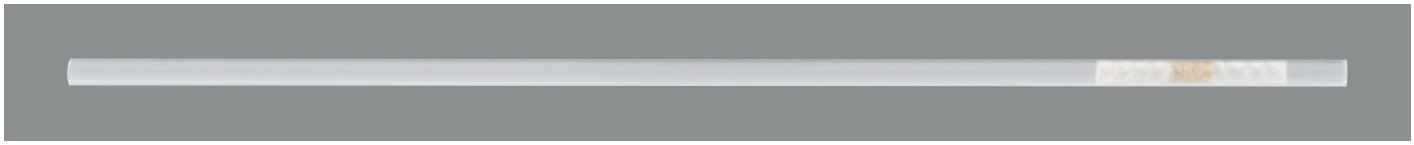
Cryo Bio System carries a line of accessories for storage and management of CBS™ straws in liquid nitrogen.

SHELF-LIFE

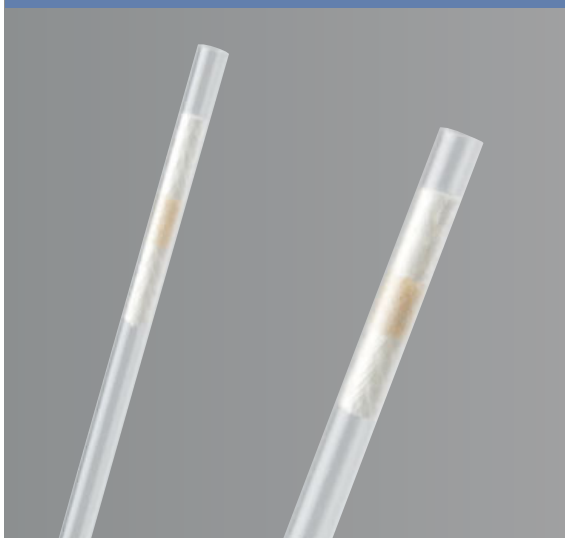
Three years from date of manufacture.

PETG cotton-plugged sperm straws

CE marked



010261 Sterile PETG 0.25 mL sperm straw
014550 Sterile PETG 0.5 mL sperm straw



DESCRIPTION / USE

Freezing and storage of human sperm.

PETG sperm straws are clear flexible straws made of a copolymer.

- 0.25 mL straw
Length: 133 mm
Internal diameter: 1.6 mm.
- 0.5 mL straw
Length: 133 mm
Internal diameter: 2.5 mm.

They are composed of two distinct compartments separated by a sliding safety plug.

- The larger compartment is designed to receive sperm and has an effective volume of 0.21 mL or 0.47 mL.
- The smaller compartment is designed as for aspiration at the time of filling.

Sterilized by irradiation.

Packaged in bags of 100 units.

IDENTIFICATION

The straws can be printed by ink jet printer or identified by special LN2 labels or indelible marker for storage in liquid nitrogen.

FILLING AND SEALING

For storage of sperm in preparation of intra-uterine insemination or in vitro fertilization, the PETG straws are filled with a micro-aspirator (or with a syringe and an adapter) and closed with short ID plugs of 13 mm in length.

STORAGE IN LIQUID NITROGEN

Cryo Bio System carries a line of accessories for storage and management of PETG straws in liquid nitrogen.

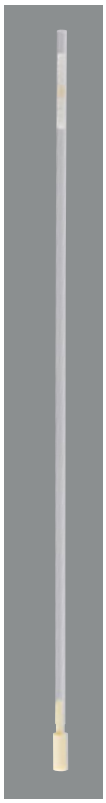
Shelf-life

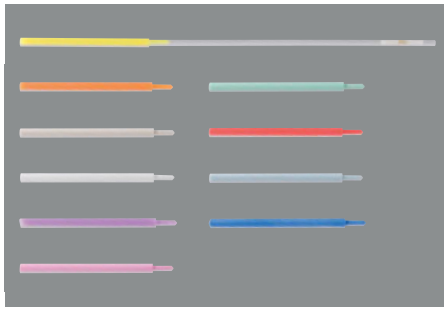
Three years from date of manufacture.

007342	Sterile obturation and identification rods (13 mm) yellow	**20**

PETG cotton-plugged embryo straws

CE marked





DESCRIPTION / USE

Freezing and storage of human embryos.

PETG embryo straws are flexible or rigid clear tubes made of copolymer.

The PETG embryo straws are closed at one end by two woven plugs enclosing a dose of powder that polymerizes when in contact with liquid.

Their useful volume is:

- 0.15 mL for the 91 mm long straws and
- 0.25 mL for the 133 mm long straws.

The internal diameter is 1.6 mm for both models.

Sterilized by irradiation.

Packaged in blisters of 4 x 5 units.

IDENTIFICATION

The straws are identified by different colored plugs.

FILLING AND SEALING

For embryo cryopreservation, the straws are filled with the use of a micro-aspirator.

After the loading procedure, the open extremity of the straw is closed by an obturation and an identification colored plug which is 42 mm in length for 91 mm straws, and 13 mm for 133 mm straws.

Shelf-life

Three years from date of manufacture.

006433	**Blister of 20 rigid embryo straws 91 mm**				
006578	**Blister of 20 rigid embryo straws 133 mm**				
014102	**Blister of 20 flexible embryo straws 91 mm**				
014103	**Blister of 20 flexible embryo straws 133 mm**				
Blister of 20 obturation and identification rods (42 mm)					
007437	yellow	**007438**	purple	**007440**	red
007442	orange	**014484**	pink	**014485**	blue
014486	grey	**014487**	green	**014488**	royal blue
014489	white				
007342	Sterile obturation and identification rods (13 mm) yellow				**20**

LabPal

DESCRIPTION / USE

Identification of CBS™ High Security straws and HSV High Security Vitrification kits.

Brady's laboratory labels are designed to withstand extreme laboratory environments.

12-month warranty.

Warning
Using our LN2 resistant labels, it is strongly recommended to overlap the label on the straw.

TECHNICAL SPECIFICATIONS

Print method: Thermal transfer (durable, non-smearing)

Multiple line printing

Weight: 0.55 kg with batteries and tape cartridge included

L x W x H: 228.6 x 114.3 x 63.5 mm

Power source: 6 AA-size batteries or AC with optional adapter

Operating temperature: 4° - 49°C

FCC Class A approved (printer)

019808 LabPal printer

019810 AC adaptor 220V for LabPal printer
019811 Hard case for LabPal printer
019812 Polyester ribbon for LabPal printer LN2 resistant
019813 Nylon tissue ribbon for LabPal printer LN2 resistant
019859 Clear polyester ribbon for LabPal printer for identification rods for CBS™ High Security straws

Micro-aspirator

014498 Micro-aspirator (delivered with one extra unit of tubing)
014500 Extra nozzle tubing for micro-aspirator

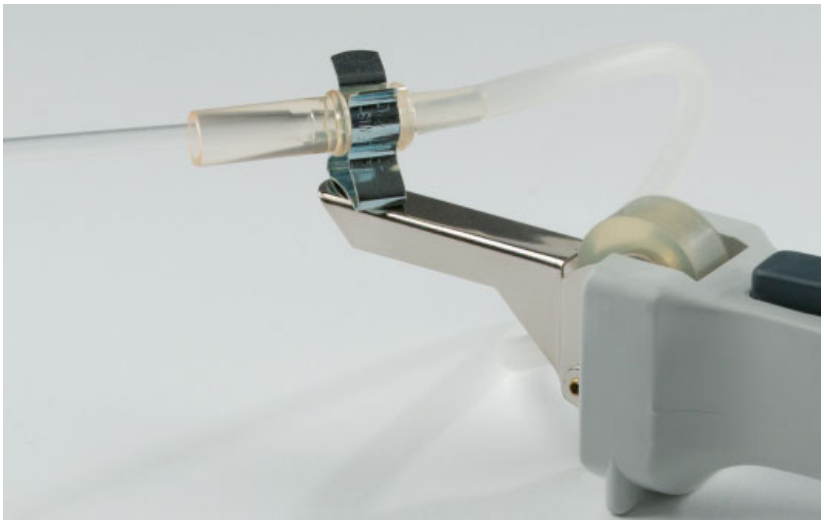
DESCRIPTION / USE

The micro-aspirator is used to manually fill all straws manu-factured by Cryo Bio System without any risk of contamination.

INSTRUCTIONS FOR USE

- Hold the aspirator in a horizontal position.
- Carefully push the straw into the adaptor and aspirate the liquid. The tube length should be about 10 cm.
- Slowly turn the thumb wheel towards the adaptor until reaching the correct filling height.
- Remove the straw just underneath the adaptor.

No maintenance required.



CBS™ visotubes and goblets

DESCRIPTION / USE

Freezing and storage of biological materials in straws.

CBS™ High Security straws are placed in goblets for storage in freezers. Goblets come in 8 different colors and their sub-compartments (called visotubes) in 12 different colors.

In the Daisy configuration, goblets hold 12 visotubes of different colors and can hold a maximum of 168 straws of 0.3 ml or 0.5 mL.

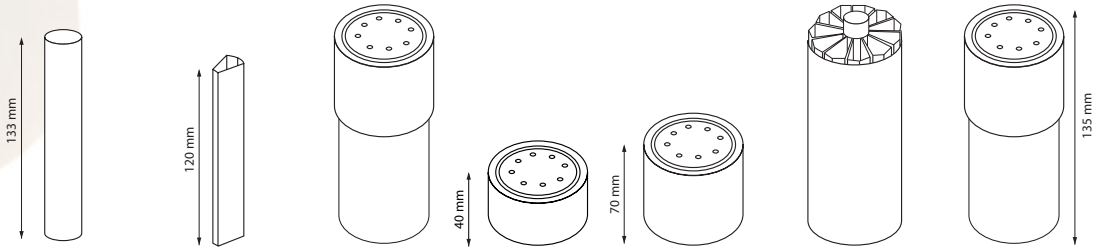
Diameter: 65 mm (67 mm with cover)

Goblet height: 117 mm

Total height of Daisy goblet (with cover): 135 mm

Visotubes height: 120 mm

Height of visotube diameter 17.5 mm: 133 mm



		Round visotube ø 17.5 mm	Triangular visotube	Goblet with pre-attached cover	Cover for gobelet ø65 mm (height 40 mm)	Cover for gobelet ø65 mm (height 70 mm)	Daisy goblet* (bag of 1)	Daisy goblet* (bag of 5)
COLORS	Clear	**006924**	-	**021224**	**021366**	**006321**	**015144**	**015152**
	Black	-	**018153**	-	-	-	-	-
	Brown	-	**018147**	-	-	-	-	-
	Red	-	**018146**	**021228**	-	-	**015146**	**015154**
	Green	-	**018145**	**021226**	-	-	**015147**	**015155**
	Blue	-	**018148**	**021225**	-	-	**015151**	**015159**
	Grey	-	**018144**	-	-	-	**018141**	**018142**
	Purple	-	**018152**	**021229**	-	-	**015150**	**015158**
	Yellow	-	**018143**	**021227**	-	-	**015148**	**015156**
	Pink	-	**018149**	-	-	-	-	-
	Orange	-	**018150**	-	-	-	-	-
	Pistachio	-	**018151**	-	-	-	**015149**	**015157**
PACKAGING		**100**	**100**	**10**	**50**	**10**	**1**	**5**
CAPACTY	0.25 mL classical straws	55	45	820	-	-	540	540
	0.5 mL classical straws	20	20	365	-	-	240	240
	0.3 mL & 0.5 mL CBS™ straws	14	14	225	-	-	168	168

Visotubes and goblets

DESCRIPTION / USE

Freezing and storage of biological materials in straws.

Arrangement using color coding of straws prior to storage in liquid nitrogen.

- **Standard goblet Ø 35 mm**
  Diameter: 35 mm
  Height: 122 mm
- **Standard goblet Ø 65 mm**
  Diameter: 65 mm
  Height: 117 mm
- **Polygonal, hexagonal and round visotubes**
  Height: 120 mm

All visotubes are also available in bulk units of 300 (singular color/diameter); please contact us for further information.

		Polygonal visotube	Hexagonal visotube	Round visotube ø 7.1 mm	Round visotube ø 9.2 mm	Round visotube ø 10 mm	Round visotube ø 12 mm	Round visotube ø 13 mm	Goblet ø 35 mm	Goblet ø 65 mm
COLORS	White	**020470**	**020486**	**020492**	**020499**	**020505**	**020511**	**020517**	**020523**	**006418**
	Blue	**020472**	**020487**	**020493**	**020500**	**020506**	**020512**	**020518**	-	**006755**
	Green	**020482**	**020488**	**020494**	**020501**	**020507**	**020513**	**020519**	-	**006754**
	Yellow	**020483**	**020489**	**020495**	**020502**	**020508**	**020514**	**020520**	-	**006756**
	Orange	**020484**	**020490**	**020496**	**020503**	**020509**	**020515**	**020521**	-	-
	Red	**020485**	**020491**	**020497**	**020504**	**020510**	**020516**	**020522**	-	**006397**
	Purple	-	**022141**	-	-	-	-	-	-	**006757**
	Pistachio	-	-	-	-	-	-	-	-	**006753**
PACKAGING		**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**	**10**
CAPACITY	0.25 mL classical straws	30	90	7	10	14	22	27	200	820
	0.5 mL classical straws	15	36	2	5	5	8	10	94	365
	0.3 mL & 0.5 mL CBS™ straws	8	22	1	3	4	7	7	75	225
	in a goblet ø 35 mm	4	1	15	10	8	5	5	-	-
	in a goblet ø 65 mm	15	7	60	37	31	21	19	-	-

Canisters

Canister with handle and white cane for classical goblets ø 65 mm without cover						**10**
007147	2-shelf	**007148**	3-shelf	**007149**	4-shelf	
007150	5-shelf	**007151**	6-shelf			
Canister with handle and white cane for Daisy goblets						**1**
008644	2-shelf	**008645**	3-shelf	**008646**	4-shelf	
007198	5-shelf	**007199**	6-shelf			
Plastic cane (color flag)						**20**
007328	white	**015693**	yellow	**015694**	salmon	
015695	pink	**015696**	dark green	**015697**	turquoise	
015698	orange	**015699**	purple	**015706**	grey	
014175	Set of 2 indelible black markers					**4**
005524	Short tongs (250 mm), stainless steel					**1**
005523	Long tongs (700 mm), stainless steel					**1**

DESCRIPTION / USE

Cryo Bio System canisters are the sleeves that hold the goblets. They are compatible with all types of liquid nitrogen and vapor freezers, and also low-temperature mechanical freezers.

Five lengths of canisters are available, with a capacity of 2 to 6 goblets stored on top of each other. A colored flag can be placed on the lifter to facilitate retrieval.

Canisters are placed in the nitrogen freezer before filling the container with liquid nitrogen. Goblets are introduced and retrieved one by one with the metal lifter; all manipulation of goblets is in the cold environment of the neck of the nitrogen freezer to ensure the stable low temperature of the samples.

Diameter: 70 mm.

SIDE

AUTOMATIC PRINTING MACHINE FOR CBS™ HIGH SECURITY STRAWS

CE marked

DESCRIPTION / USE

An automatic system for ink-jet printing of biological samples in CBS™ High Security straws.

SIDE is compatible with CBS™ 0.3 or 0.5 mL open or sealed straws and can automatically print bar codes (code 128) and/or alphanumerical identification on the jacket of the straws.

SIDE is a flexible identification system enabling the laboratory to:

- print the requested number of straws for a sample;
- print the same code on the straws as the sample to ensure the link and
- print straws after sealing to ensure sterility of the content.

SIDE guarantees a one-to-one identification relationship between the straw and the sample code.

The SIDE machine consists of 3 parts:

- a straw handler;
- a PC with pilot software;
- and an ink-jet printing system.

SIDE machine cycle steps:

- Hopper feeding of straws;
- Ink-jet printing of tamper proof bar code and corresponding text of up to 10 digits and control key (code 128);
- Manual transfer to their storage address.

The ink-jet printing system requires active evacuation of its solvent vapors.

Setup, maintenance and shutdown: 15 minutes per day.

SIDE pilot software

The SIDE software features bar code reading or keyboard entry of codes to be printed and export of production files in different formats.

TECHNICAL SPECIFICATIONS

- SIDE

L x W x H: 500 x 450 x 190 mm

Weight: 20 kg

SIDE is provided with a Linx or Domino printer.

Power supply: 110 or 220 V / 60 or 50 Hz

SIDE automatic printing machine for CBS™ High Security straws

019651 220 V / with Linx printer
019652 110 V / with Linx printer

018802 220 V / with Domino printer
018803 110 V / with Domino printer

SYMS II

Unique sealer for CBS™ High Security straws and tubes

The SYMS II sealer is a bench top unit that can be used under laminar flow hood and is using the « thermal » procedure to weld CBS™ High Security 0.3 mL, 0.5 mL and 2 mL straws, CBS™ High Security tubes as well as the HSV High Security vitrification straw.

CE marked

KEY FEATURES

- Available in 3 languages (French, English or Spanish)
- Glove compatible touch screen interface
- Easy-to-use touch screen advises user of the machines actions: heating up, ready, welding process, etc.
- Pre-set specific combination of seal temperature, time and jaw position for each CBS™ device
- Two sealing modes: fully automatic straw detection system or touch screen operator control
- Error management: alarm message on touch screen and audible signal
- Electronic touch screen monitors and advises on the maintenance needs of the machine
- Easy to clean and maintain

INSTRUCTIONS FOR USE

- Place the CBS™ High Security straw or the CBS™ High Security tube holder;
- Place the straw or tube on the holder and gently push forward;
- Automatic mode: As soon as the sensor detects the straw or tube in the sealing position, the sealing process starts automatically;
- Manual mode: the straw or tube is sealed when the operator presses the 'WELD' button on touch screen.

022319 **SYMS II sealing system for CBS™ High Security straws and tubes**
022847 Spare Teflon strip

TECHNICAL SPECIFICATIONS

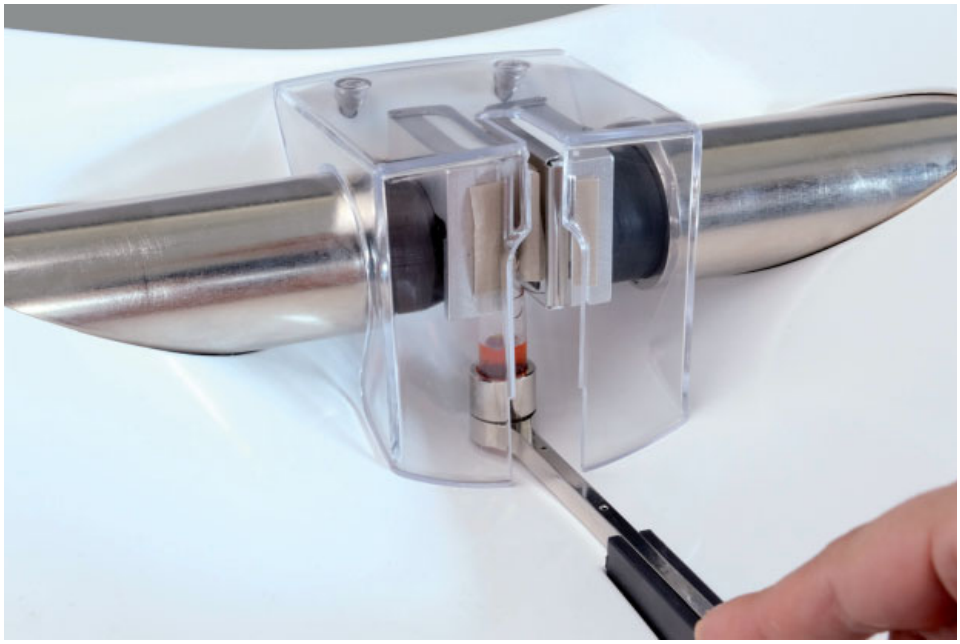
Setup, maintenance and downtime time are approximately 5 minutes per day.

Potentially contaminated parts of the system can be cleaned with ethanol or non-corrosive decontamination fluids.

L x W x H: 363 x 276 x 152 mm

Weight: 6 kg

Power supply: 110 or 220 V / 60 or 50 Hz



SYMS

Sealing system for CBS™ High Security straws

CE marked

DESCRIPTION / USE

Sealing system: Cryo Bio System has developed a thermal pulse sealing device for impermeable sealing of CBS™ High Security straws in ionomeric resin.

The sealing device is electronically operated by a push-button or foot pedal as desired.

INSTRUCTIONS FOR USE

- After the filling procedure with microaspirator, gently remove the transparent or yellow filling nozzle;
- Once this free part of the CBS™ straw is filled and sealed, there is no longer any risk of contamination;
- Insert an inner identification rod, or outer colored identification jacket;
- Seal the other end of the straw;
- Freeze according to a method appropriate for the type of product.

TECHNICAL SPECIFICATIONS

L x W x H: 230 x 220 x 170 mm

Weight: 6 kg

Power supply: 110 or 220 V / 60 or 50 Hz

016399 **SYMS sealer for CBS™ High Security straws**

009848 Spare kit for SYMS sealer (Teflon strips, fuses...)

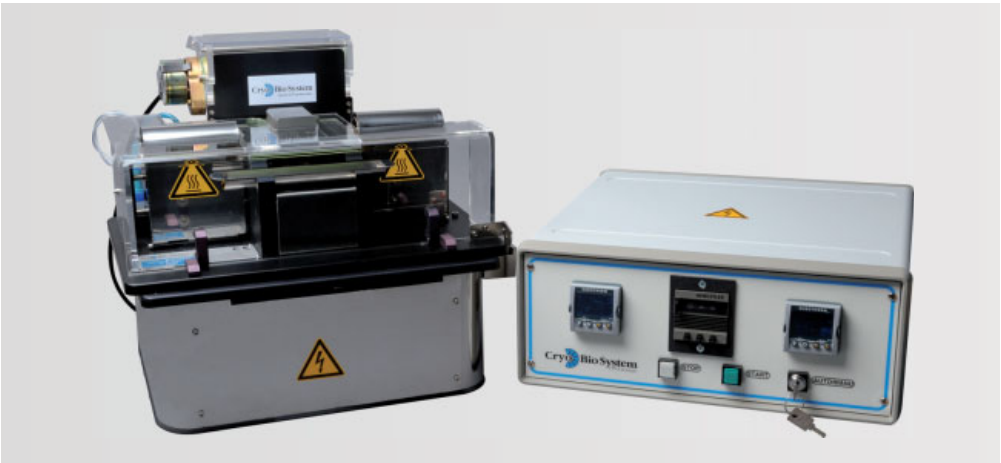
PACE

SEMI-AUTOMATIC FILLING AND SEALING SYSTEM FOR CBS™ HIGH SECURITY STRAWS

CE marked

PACE semi-automatic filling and sealing system for CBS™ High Security straws

018451 PACE 220 V / 50 Hz
018450 PACE 110 V / 60 Hz



007454	Sterile CBS™ injection tubing (by 5 x 10)	**50**
018620	Sterile long blue CBS™ injection tubing (by 5 x 5)	**25**
007451	Sterile CBS™ aspiration tubing (by 5 x 10)	**50**

DESCRIPTION / USE

A semi-automatic system for packaging of biological samples in CBS™ High Security straws.

PACE automatically fills and thermally seals both ends of CBS™ 0.3 or 0.5 mL straws from an open primary sample tube.

CBS™ PACE system is the ideal packaging system for sperm banks or medium to large-size collection protocols.

PACE uses CBS™ straws that are pre-identified with bar codes and/or alphanumerical codes or just before printing with SIDE.

Different blood or sperm products from the same individual may be processed in a pre-defined order with the same filling nozzle.

The PACE system consists of 2 parts:

- the straw distribution and filling unit and
- its control box.

PACE machine cycle steps:

- Hopper feeding sample straws individually;
- Manual positioning of primary sample tube and filling tubing;
- Straw filling by aspiration with built-in pumps;
- Controlled thermal autogenic sealing at both ends of straw;
- Manual transfer of straws to their storage-address (visotube and goblet).

The throughput of straws is fully dependent on the protocol (e.g. number of straws filled per primary tube and the number of different biological products).

Setup, maintenance and shutdown: 15 minutes per day.

All potentially contaminated parts can be cleaned with ethanol or non-corrosive decontamination fluids.

The PACE system can be placed on the laboratory bench or under laminar flow with sterile straws and filling tubing and only needs power supply.

TECHNICAL SPECIFICATIONS

- **PACE**

L x W x H: 380 x 300 x 370 mm
Weight: 25 kg

- **Control box**

L x W x H: 410 x 365 x 155 mm
Weight: 14 kg

Power supply: 110 or 220 V / 60 or 50 Hz

A PACE can be configured for CBS™ 0.3 or 0.5 mL straws.

MAPI

AUTOMATIC FILLING, SEALING AND PRINTING SYSTEM FOR CBS™ HIGH SECURITY STRAWS

CE marked

DESCRIPTION / USE

An automatic system for packaging and identification of biological samples.

From an open primary sample tube, MAPI automatically fills CBS™ 0.3 or 0.5 mL straws, thermally seals both ends, prints bar codes and/or alphanumerical identification on the jacket and in-line validates the process by immediate bar code reading.

The MAPI system consists of the filling robot and its control box, a special ink-jet type printer and a PC with the MAPI pilot software. The automate is placed on a special laboratory bench at ergonomical height.

MAPI machine cycle steps:

- Hopper feeding of straws;
- Bar code reading or key board entry of primary tube code;
- Manual positioning of primary sample tube and filling nozzle;
- Controlled straw filling by aspiration with built-in pumps;
- Controlled thermal autogenic sealing at both ends of straw;
- Ink-jet printing of tamper-proof bar code and corresponding text of up to 10 digits and control key (code 128);
- Reading of straw bar code for validation;
- Selection of validated straws;
- Manual transfer of straws to their storage address (visotube and goblet).

The throughput of straws is fully dependent on the protocol (e.g., number of straws filled per primary tube and number of different biological products).

Setup, maintenance and shutdown: 15 minutes per day.

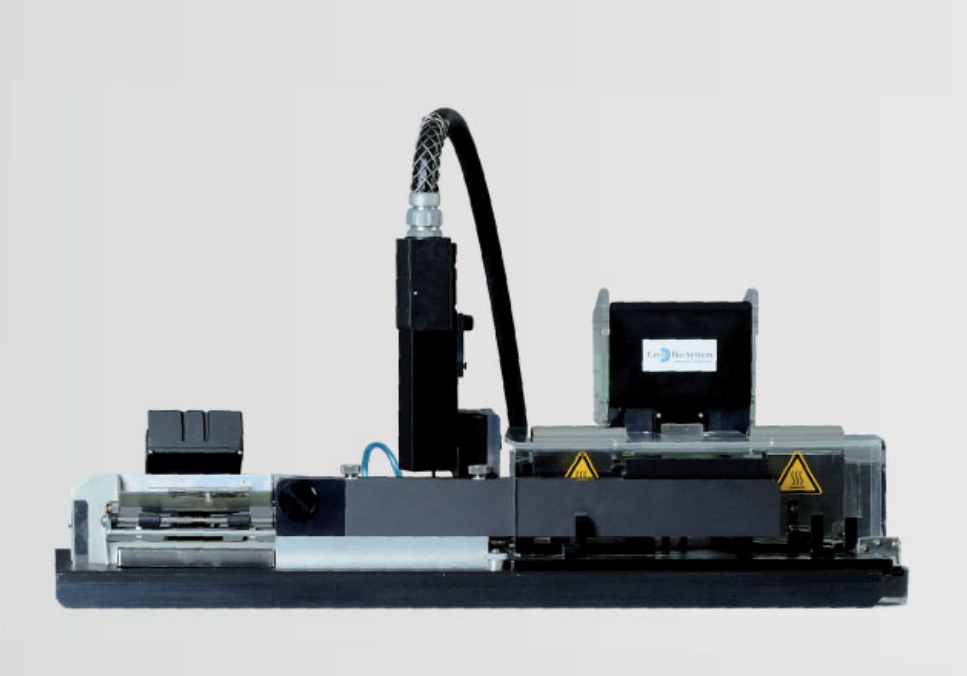
All potentially contaminated parts can be cleaned with ethanol or non-corrosive decontamination fluids.

The ink-jet printing system requires active evacuation of its solvent vapors.

MAPI pilot software

The MAPI pilot software is installed on the PC provided with the system to pilot the machine cycle of the MAPI system: distribution, filling, sealing, printing and re-reading of straws. The code to be printed on the straw can be either a bar code read from the primary tube, keyboard entered or programmed fixed text.

007218 MAPI automatic filling, sealing and printing system for CBS™ High Security straws



007454	Sterile CBS™ injection tubing (by 5 x 10)	**50**
018620	Sterile long blue CBS™ injection tubing (by 5 x 5)	**25**
007451	Sterile CBS™ aspiration tubing (by 5 x 10)	**50**

TECHNICAL SPECIFICATIONS

- **MAPI**

L x W x H: 760 x 260 x 470 mm
Weight: 35 kg

- **Support table**

L x W x H: 1200 x 600 x 900 mm
Height with machine: 1260 mm
Weight with machine: 102 kg

- **Control box**

L x W x H: 430 x 380 x 190 mm
Weight: 14 kg

- **Printer Domino control box**

L x W x H: 650 x 450 x 375 mm
Weight: 20 kg

Suction unit for DOMINO connectable to an extractor duct, not included (diameter 80 mm)

Power supply: 110 or 220 V / 60 or 50 Hz

Controlled rate freezers FROM PLANER

016225 Planer Freezer Kryo 360-1.7

016130 Planer Freezer Kryo 360-3.3

018134 Planer Freezer Kryo 560-16

DESCRIPTION / USE

Kryo 360-1.7 / Kyro 360-3.3

Fully featured biological freezer specifically designed for cryopreservation of sperm, oocytes, ovarian tissue and human embryos, in straws or ampoules.

- Chamber volume: 1.7 or 3.3 liters
- CBS™ sperm straw capacity: 45 or 90
- CBS™ embryo straw capacity: 45
- Controlled range: +40°C to -180°C
- Cooling rates: -0.01 to -50°C / min
- Controlled heating rates: 0.01 to 10°C / min
- Horizontal or vertical freezing
- System controller: MRV in 15 positions, radially located
- System pump: LNP4-C
- System Dewar: LAB 20 or 30
- PC software: Delta T

12-month warranty.

INDICATIONS

- Controller displays demand, sample and chamber temperatures, programme stage and current temperature graphic
- Menu driven controller, simple to program and operate
- Horizontal or vertical operation
- Compact design
- Standard operating features:
  - Start above ambient
  - Controlled heating
  - Data Printing (integral printer)
  - Comms port for PC connection
  - Fast cooling rates
  - Multiple safety features

DESCRIPTION / USE

Kryo 560-16

Fully featured biological freezer specifically designed for cryopreservation of bone marrow, stem cells, skin, cord blood, sperm, oocytes, ovarian tissue and human embryos, in straws, ampoules or bags.

- Chamber volume: 16 liters
- CBS™ straw capacity: 456
- Capacity: 11 x 250 / 500 ml bags, vertically in chamber
- Controlled range: +30°C to -180°C
- Cooling rates: -0.01 to -50°C / min
- Controlled heating rates: 0.01 to 10°C / min
- System controller: MRV
- System pump: LNP4-C
- System Dewar: LAB 30
- PC software: Delta T

12-month warranty.

INDICATIONS

- Controller displays demand, sample and chamber temperatures, programme stage and current temperature graphic
- Menu driven controller, simple to program and operate
- Protocol stage trigger on sample or chamber temperature or time
- Unique forced laminar flow system ensures efficient, even cooling
- Standard operating features:
  - Start above ambient
  - Controlled heating
  - Data printing (integral printer)
  - Comms port for PC connection
  - Fast cooling rates
  - Multiple safety features

Coming soon!

CBS™ Co-XStraw™

The new generation of fully colored CBS™ High Security 0.3 & 0.5 mL straws

CBS™ High Security tube

A revolutionary High Security 1.2 mL sterile container for long term storage of sperm and ovarian tissue in liquid nitrogen. Safe sealed as CBS™ High Security straws.

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