

# CBS™ High Security straws

A unique fully secured system for storage in LN2



For the highest quality cryopreservation of biological samples

**CryoBio System**  
Groupe I.M.V. Technologies

[www.cryobiosystem.com](http://www.cryobiosystem.com)

# The only fully secured system for LN2 storage

Improved Quality, Flexibility, Efficiency and Security



## Reliability & Security

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- Guaranteed leak-proof and shatter-proof container all the way down to LN2 temperatures
- Mechanically resistant to pressures of up to 150 kg/cm<sup>2</sup>
- Indestructible under normal conditions of use
- Full seals eliminate any possibility of cross-contamination to the specimen or its environment

## Traceability

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- Colors - Primary identification
- Outside printing on the straw
- Tamperproof labeled rod to insert inside the straw

### Bar codes - Positive identification

- A bar code and alphanumerical code inkjet printed on the straw
- Resistant to liquid nitrogen, abrasive ice crystals and plastic materials
- Printed jackets and labeled rods cannot be removed until the straw is opened for use

## Versatility

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### Compatibility

- All nitrogen freezers and containers, both liquid and vapor phase
- Ultra low temperature mechanical freezers

# CBS™ High Security straws



## CBS™ High Security straws

- CBS™ High Security straws are made from an ionomeric resin chemically inert and biocompatible.
- There are three different volumes available: 0.3, 0.5 and 2 mL.



## CBS™ High Security Co-XStraws™

- New CBS™ High Security patented straw using a new technology of a plastic cover on the ionomeric resin of the straw which enables a printing on the full length. Available in 8 different colors.
- Dimensions identical to the CBS™ straw, inside of material identical to the CBS™ straw but with an outer PETG envelope for color guiding and space saving. Two different volumes available: 0.3 and 0.5 mL.
- Storage space efficiency improvement in LN2 (+14 %)

## Quality cryopreservation



Digitool brand

- All CBS™ containers are developed to optimize cryopreservation of precious samples.
- CBS™ High Security straws benefit from a high surface to volume ratio for improved and homogenous heat exchange over the total volume of the straw.
- Thermal seal of CBS™ straws, HSV kit and CBS™ tube enables direct and complete immersion in liquid nitrogen.
- Color and bar code identification without impairing the quality of the samples through temperature changes.





## Straw technology concept

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- CBS™ High Security straws are designed for cryopreservation of liquid biological samples such as plasma, serum, buffy coat, red blood cells, extracted DNA, urine, mouth wash, cell suspensions, bacterial or viral strains, gametes, embryos and gonadic tissue.



## Fonctional plugs

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- CBS™ High Security straws are filled by aspiration through an air permeable plug.
- There are two types of plugs for CBS™ High Security straws:
  - The standard plug made of two specifically woven polyamide fibers enclosing a polymerizing powder. Available in 7 colors.
  - The hydrophobic plug made of a 0.22 µm membrane sealed on a hollow stem.



## Filling, sealing and identifying

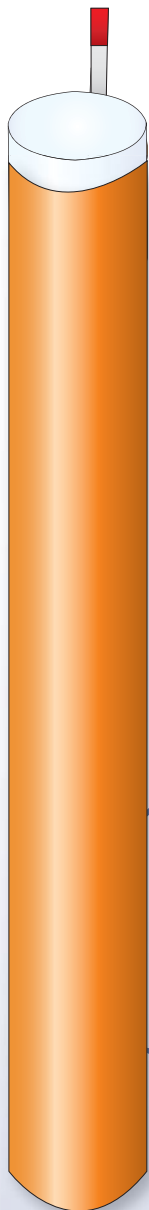
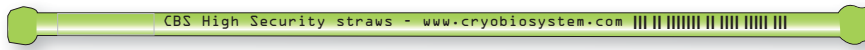
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- Directly after filling, both extremes of the CBS™ High Security straws are thermally sealed with dedicated equipment: SYMS II®, PACE®, MAPI® or DIVA®.
- Four types of CBS™ High Security straws filling and sealing process, one for each equipment:
  - Sealing with SYMS II® after manual filling and identification with SIDE® or printed labels;
  - Automatic filling and sealing with PACE® for pre-printed CBS™ High Security straws;
  - Automatic filling, sealing and identification with MAPI® and
  - Fully-automatic filling, sealing, identification and sorting with DIVA®.
- This technology makes the straw absolutely leakproof, preventing cross-contamination between the sample and its environment.

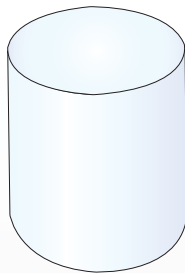


# CBS™ storage system

## CBS™ High Security Co-XStraw™



CBS™ canister



CBS™ Daisy goblet



CBS™ visotube

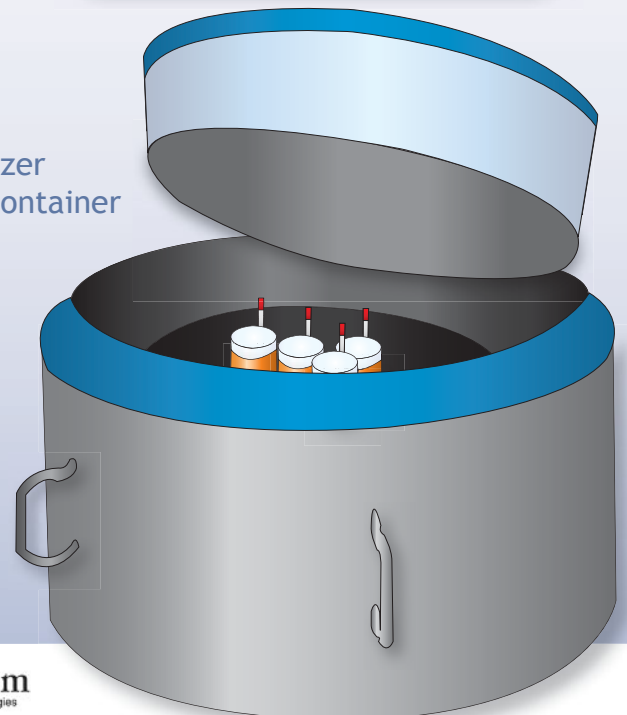
16 CBS™ Co-XStraws™  
maximum per visotube.

CBS™ High Security straws are placed in color coded goblets and visotubes 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, which represents a total of 192 CBS™ Co-XStraws™.

-80°C freezer  
or -196°C LN2 container



Heights of canisters compatible with most LN2 freezers.

Five heights of canisters are available, with a capacity of 2 to 6 goblets stored on top of each other.

# CBS™ High Security straws



## Application fields

- Biorepositories for epidemiological and disease research
- Hospital biobanks
- Cell and genetic therapy units
- Pharmaceutical companies producing vaccines from living cells
- Genetic heritage archives
- Sperm banks
- Laboratories and clinics specialized in reproduction biology



## Technical features

- CBS™ High Security 0.3 and 0.5 mL straws and Co-XStraws™  
Length: 130 mm after sealing  
Internal diameter: 2.5 mm
- CBS™ High Security 2 mL straws  
Length: 130 mm after sealing  
Internal diameter: 5 mm



## International standards compliance

- CE marked Medical devices
- FDA 510 (k) approved



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