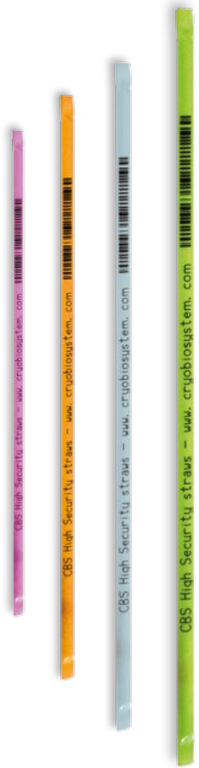
# CBS™ High Security Co-XStraws

## The fully optimized system for storage at -80°C




### Reliability & Security

- Guaranteed leak-proof
- Mechanically resistant to pressures of up to 150 kg/cm²
- Indestructible under normal conditions of use
- Full seals eliminate any possibility of cross-contamination to the specimen or its environment

### Traceability

- Colors - Primary identification
- ID Printed on external layer

### Bar codes - Positive identification

- A bar code and alphanumerical code inkjet printed on the straw
- Resistant to abrasive ice crystals and plastic materials

### Compatibility

- Ultra low temperature mechanical freezers (-80°C)

# CBS™ High Security straws


SYMS III


PACE


MAPI


DIVA

**Distributed by:**

### International standards compliance
(Does not apply to CBS™ High Security Co-XStraws for the moment)

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

### Technical features

- Fully secured in LN2 storage
- 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

### 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

Edition 01/2017.CBS.1.0512EF.3 - Non contractual pictures and technical specifications
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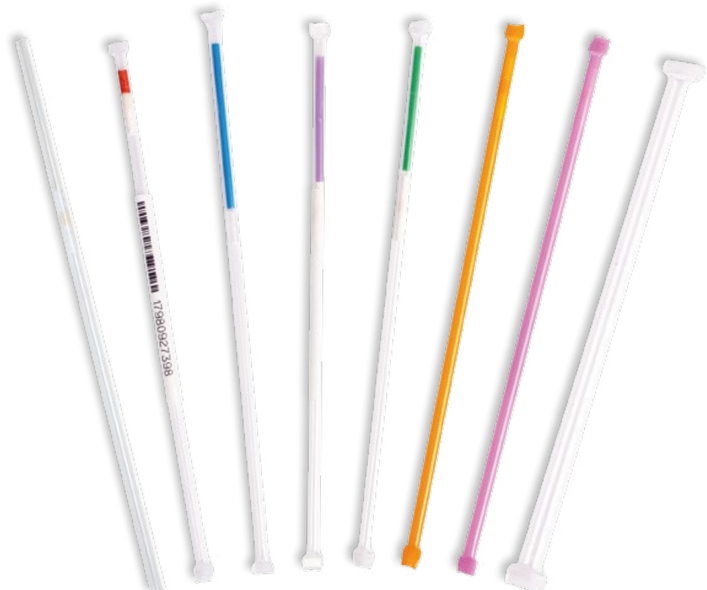
# CBS™ High Security straws

## A unique fully secured system for storage in cold and ultra-cold temperature




For the highest quality cryopreservation of biological samples

Connected to...LIFE SCIENCES

Cryo Bio System Groupe I.M.V. Technologies

# CBS™ High Security straws

## CBS™ High Security straws

- CBS™ High Security straws are made from a transparent ionomeric resin **chemically inert and biocompatible.**
- **There are** three different volumes available**: 0.3, 0.5 and 2 mL.**
- **Resistant and fully secured for LN2 storage**

## CBS™ High Security Co-XStraws

- **CBS™ High Security patented straw** using a technology of 2 layers extruded at the same time where the external enables a printing on the full length. Available in 8 colors for storage at -80°C.
- **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** (+14 %)
- Optimization for space in CBS™ visotubes (14 →16)
- Large window for printing

## Quality cryopreservation

Digitcool 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™ High Security straws, vitrification straw and tube enables **direct and complete immersion** in liquid nitrogen.
- **Color and bar code identification** without impairing the quality of the samples through temperature changes.



Cryo Bio System
Groupe I.M.V. Technologies

## Straw technology concept

- 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.

## Functional plug

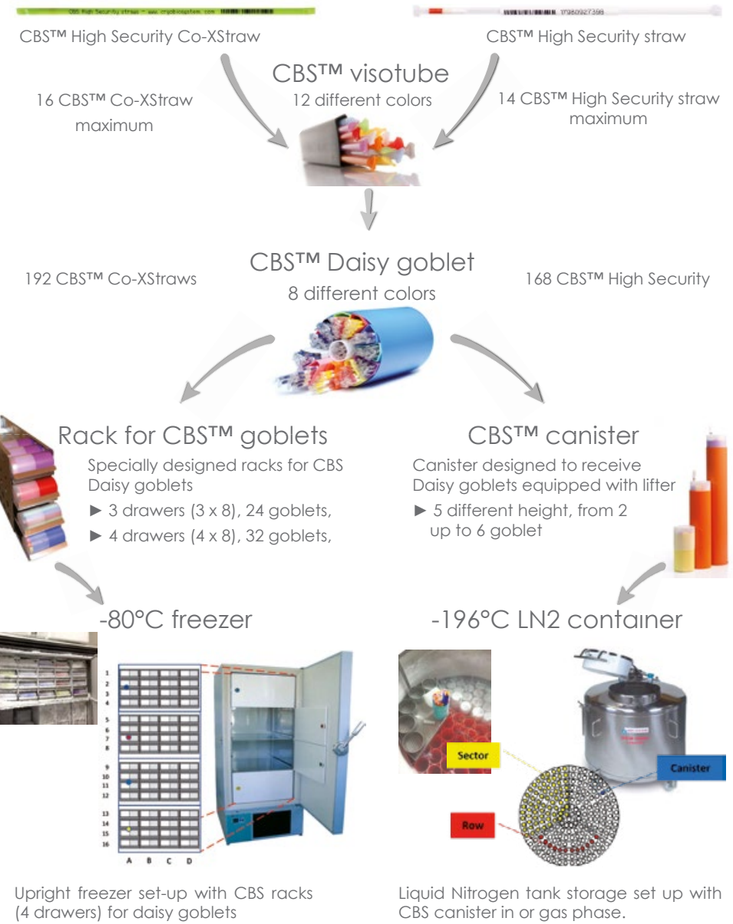
- CBS™ High Security straws are filled by aspiration through an air permeable plug.
- Plug made of two specifically woven polyamide fibers enclosing a polymerizing powder. Available in 7 colors for the 0.5 mL version. Always white plug for the 0.3 mL version or 6 colors with plastic rod inserted.

## Filling, sealing and identification

- Directly after filling, both extremities of the CBS™ High Security straws are thermally sealed with dedicated equipment: SYMS III, PACE, MAPI or DIVA.
- Four types of straws filling and sealing process, one for each equipment:
  - Sealing one extremity at the time with SYMS III after manual filling with micro-asprirator. Identification can be preprinted or labels
  - Automatic filling and sealing with PACE for pre-printed CBS™ High Security straws
  - Automatic filling, sealing and printing with MAPI. ID and barcode are inkjet printed.
  - 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




Upright freezer set-up with CBS racks (4 drawers) for daisy goblets

Liquid Nitrogen tank storage set up with CBS canister in or gas phase.