



Animal Cell Culture

LoSera™ and Cell Freezing Media Webinar





Animal Tissue Culture

Products for your needs



Cell Culture Platform



MEDIA

Classical Media

Insect Media

HiGlutaXL™ Media

LoSera™ Media

HiSep™ Density Gradient Separation Media

CryoXL™ Cell Freezing Media



Animal Tissue Culture

LoSera™ Media (RSL)

Medium requiring reduced serum supplementation

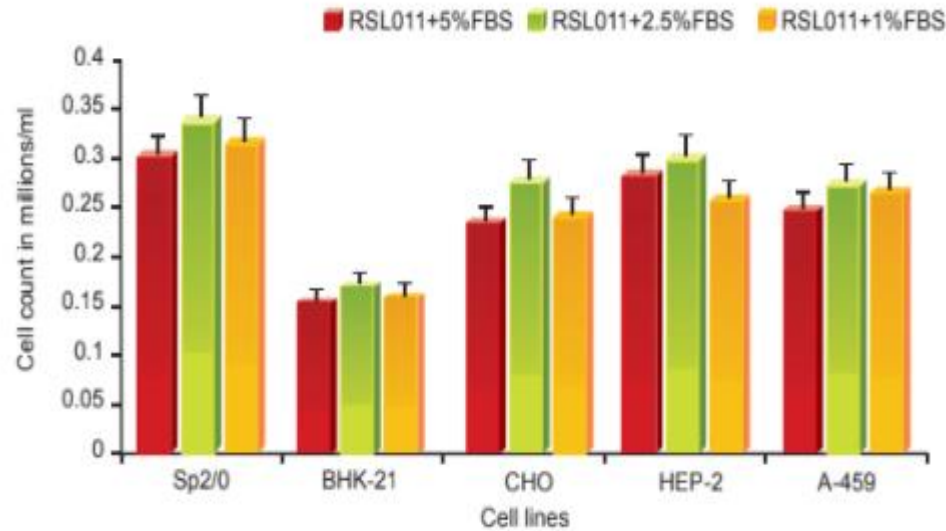
- Optimized at 2.5% serum concentration
- Serum requirement reduced from 10% to 2.5%
- Reduces the overall cost of medium
- Improves reproducibility due to decrease in lot-lot variation of sera
- Easier purification of products
- DMEM
- DMEM – F12
- IMDM
- MEM
- RPMI-1640
- Nutrient Mixture F10 Ham
- Nutrient Mixture F12 Ham





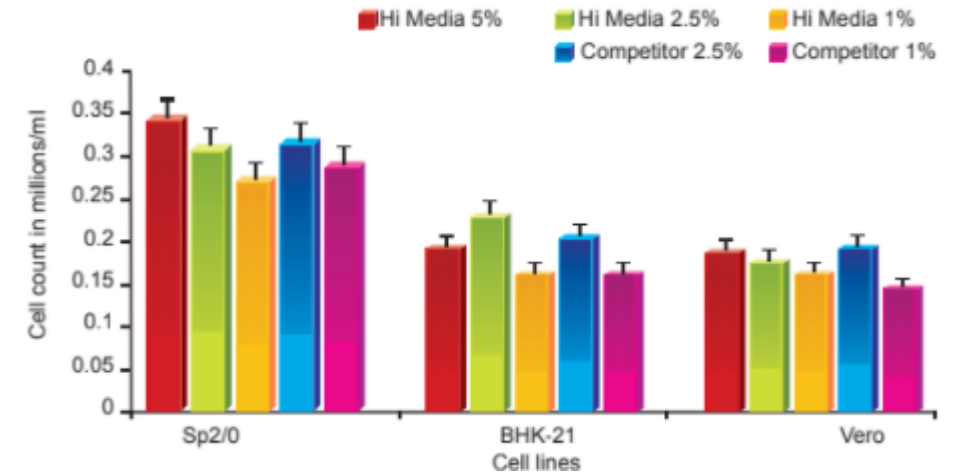
Animal Tissue Culture

LoSera™ Media (RSL)



Comparative performance of LoSera RPMI 1640 Vs RPMI 1640 supplemented with 5% FBS

Suitability of RPMI 1640 for Cell Culture of Multiple Cell Types



Comparative performance of LoSera™ DMEM Vs Competitors Reduced Serum Medium

Suitability of DMEM for Cell Culture of Multiple Cell Types



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LoSera™ Media (RSL)

Recommendations for use with LoSera™ Media

- **LoSera™** media optimized at 2.5% serum concentration for Cell culture applications.
- Suggested concentrations ranges from 1-5%
- They may well be adjusted for specific cell types or applications.
- **LoSera™** media are provided as 1X solutions and need to be supplemented with 4mM Glutamine & FBS
- It is recommended to reduce the amount of antibiotics in proportion to the amount of serum reduced.



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LoSera™ Media (RSL)

Applications of LoSera™ Media

- Can be used for most of the common cell lines both adherent and suspension.
- Prevents fibroblast overgrowth in primary culture.



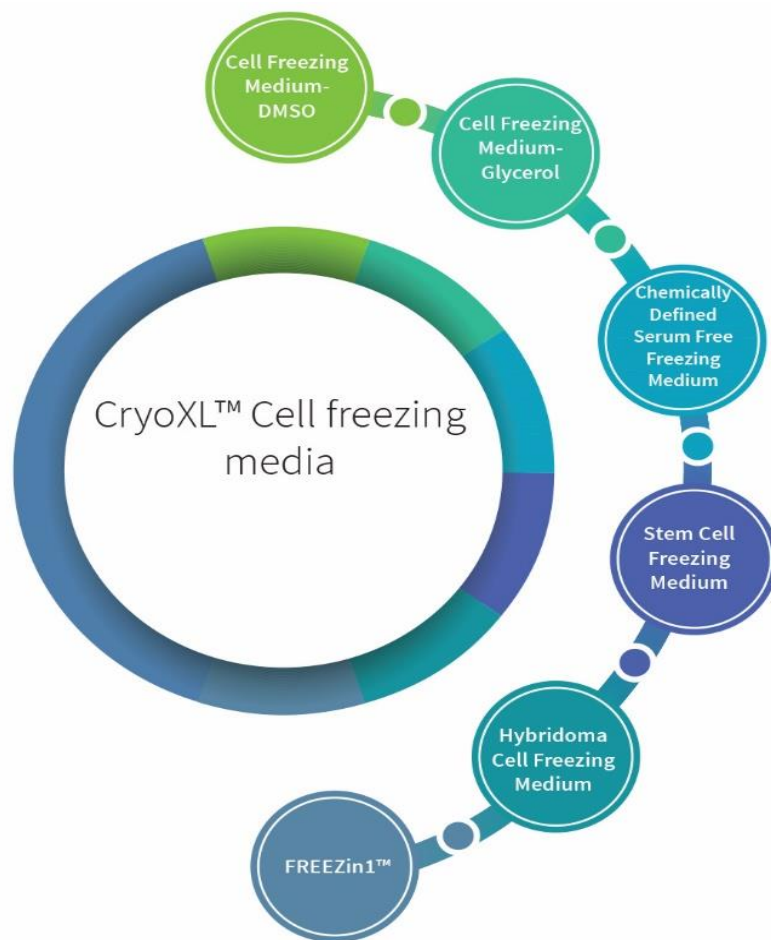
Cryopreservation Media





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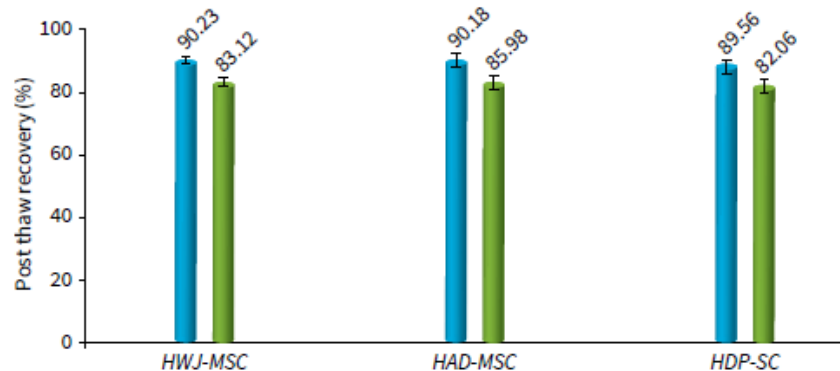
Products for your needs





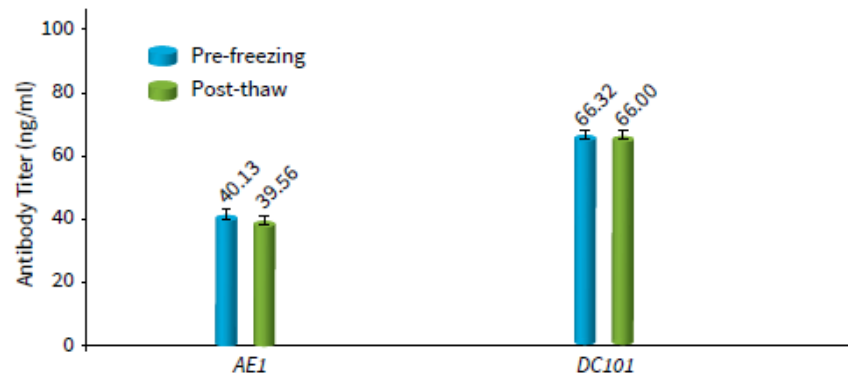
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Preservation with Improved Cell Recovery



CryoXL™ Stem Cell Freezing Medium
 Traditional freezing medium

Performance of **CryoXL™ Stem Cell Freezing Medium** was evaluated using mesenchymal stem cells and compared with the traditional cryopreservation medium. CryoXL™ Stem Cell Freezing Medium exhibits higher post thaw recovery compared to the traditional medium



Performance of **CryoXL™ Hybridoma Freezing Medium** was evaluated using IgG 1 producing DC101 cells and IgG1 producing AE-1 cells. Pre-freeze and Postthaw antibody productivity was analyzed by ELISA. Productivity of both the Hybridoma cell lines was found to be unaffected after revival.

For recovery of Stem Cells

Product Name	Code
CryoXL™ Stem Cell Freezing Medium w/ FBS and DMSO w/o Antibiotics	TCL107-50ML

For recovery of sensitive Hybridoma Cells

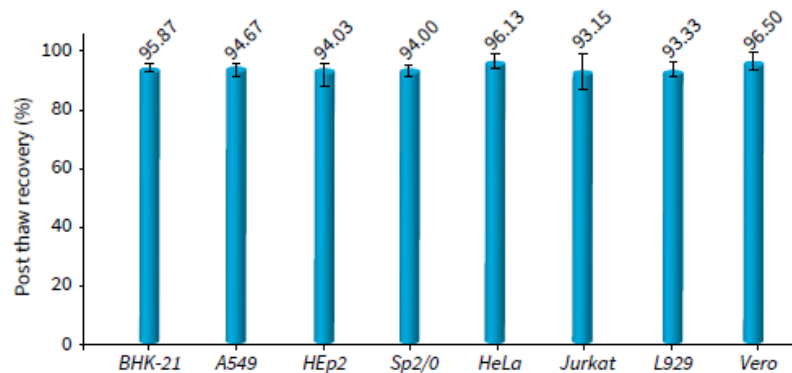
Product Name	Code
CryoXL™ Hybridoma Cell Freezing Medium, DMSO, 1X w/ FBS and DMSO w/o Antibiotics	TCL123-50ML



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Preservation with Improved Cell Recovery

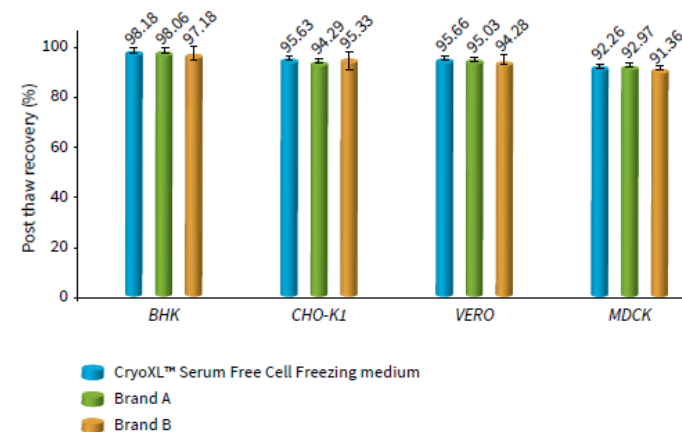
For regular and sensitive cell lines



Post thaw recovery of different cell lines cryopreserved in **CryoXL™ DMSO (product code: TCL043)**

Product Name	Code
CryoXL™ Cell Freezing Medium-DMSO, 1X w/ FBS and DMSO w/o Antibiotics	TCL043-50ML
CryoXL™ Cell Freezing Medium-DMSO, 1X w/ FBS and DMSO w/o Antibiotics	TCL093-50ML
CryoXL™ Cell Freezing Medium-DMSO, 1X w/ FBS and DMSO w/o Antibiotics and Phenol red	TCL056-50ML
CryoXL™ Cell Freezing Medium-Glycerol, 1X w/ FBS and Glycerol w/o Antibiotics and Phenol red	TCL078-50ML
CryoXL™ Cell Freezing Medium-Glycerol, 1X w/ FBS and Glycerol w/o Antibiotics	TCL044-50ML

For Animal origin free and Serum – Free Formulation



Performance of **FREEZin1™ (CryoXL™) Serum Free Freezing Medium** was evaluated using different serum free cultures and compared with commercially available serum free freezing media. Post-thaw recovery of cells cryopreserved in **FREEZin1™ (CryoXL™) Serum Free Freezing Medium** was found to be at par with other commercially available media.

Product Name	Code
FREEZin1™ w/ DMSO w/o Antibiotics, Antimycotics and Phenol red Sterile filtered	TCL098-50ML

* **CryoXL™** is former name of **FREEZin1™**



For life is precious



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FREEZin1™ (TCL098)

- HiMedia's Cell Freezing Media are complete, ready to use reagents designed to protect and preserve cells during frozen storage.
- These media are a convenient and cost-effective alternative to in-house freezing media and can be used for a wide **variety of mammalian cells**.
- TCL098 is **FREEZin1™** chemically defined, serum free cell freezing medium designed to freeze the cells grown in serum free and animal component free conditions.
- **FREEZin1™** ensures high cell viability upon revival from cryo-storage and can also be used for cryopreservation of stem cells and primary cells.
- **FREEZin1™** is a proprietary formulation.



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FREEZin1™ (TCL098)

- Ideal for serum-free applications and clinical studies
- Manufactured under WHO-GMP and ISO 9001:2015 conditions
- Sterility- and cell-based quality control
- Outstanding performance in terms of vital cell count, proliferation, adherence and bioactivity after thawing
- Stem cell-suitable
- Optimized for a variety of cell types. Tests of suitability include:
 - Hybridomas
 - Primary cells
 - Stem cells
 - Established mammalian cell lines such as CHO, MRC-5, HEK-293, HepG2, HeLa, BSC-1, BGM, 3T3, MA-10, etc.



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Quality Control

Appearance : Colorless, clear solution

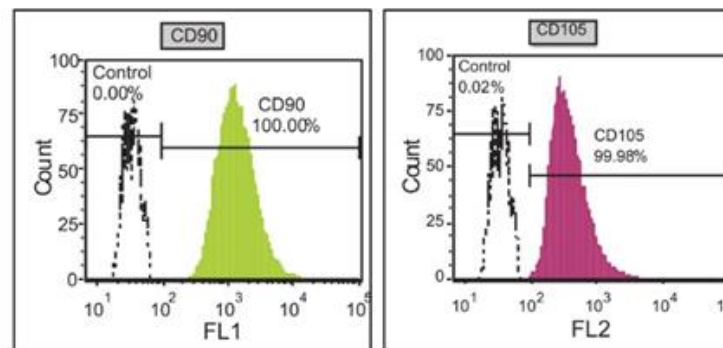
pH : 7.60 - 8.20

Osmolality in mOsm/Kg H₂O : 1800.00 - 2200.00

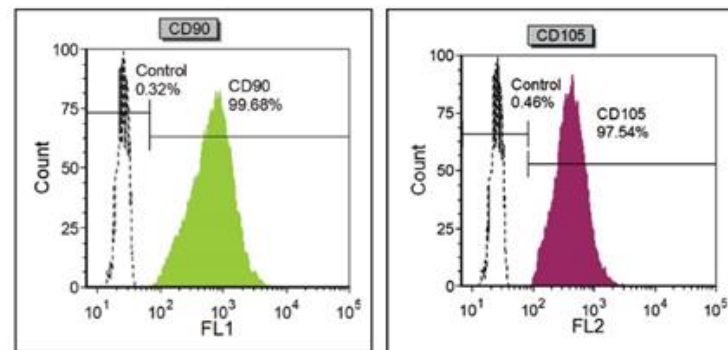
Sterility : No bacterial or fungal growth is observed after 14 days of incubation, as per USP specification.

Performance Test : Performance test is done by freezing cells and doing a viability assessment after thawing and comparing it with a control medium.

Before Freezing



After Revival





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Competition Mapping

<u>Brand Name</u>	<u>Product</u>
HiMedia	FREEZin1™
Promocell	Freezing Medium Cryo-SFM
Lonza	ProFreeze Serumfree Freezing Medium
Biological Industry	NutriFreez D10 Cryopreservation Medium
Thermo Fisher Scientific	Synth-a-Freeze™ Cryopreservation Medium



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Cross selling Products

Cryovials

- Internally threaded & externally threaded
- Self standing with frosted area for writing
- Non-pyrogenic, non-toxic, DNase-RNase-free



HiQ™ Premium grade cryovials Gamma sterilized 1.2ml, 2ml, 5ml



E-beam sterilized 0.5ml, 1.2ml, 2ml, 4ml, 5ml



Animal Tissue Culture

Cryoprotectants



CryoXL™ DMSO (TC450U)

Product Name	Code
Dimethyl sulphoxide (DMSO) Cell Culture Tested	TC185-100mL TC185-250mL
Dimethyl sulphoxide (DMSO), Sterile Cell Culture Tested	TC349-100mL
Glycerol Cell Culture Tested	TC053-500mL TC053-1L
HybridoXL™ DMSO, Hybridoma Tested	TC429-100ML
HybridoXL™ DMSO, Sterile Hybridoma Tested	TC433-100ML
CryoXL™ DMSO, Sterile Meets USP and EP Specifications	TC450M-100ML
Glycerol Meets USP and EP specifications	TC503M-500ML TC503M-1L
D-(+)-Trehalose dihydrate Cell Culture Tested	TC177-10G TC177-25G TC177-100G
D-(+)-Trehalose dihydrate Meets USP and EP testing specifications	TC177M-10G TC177M-25G TC177M-100G
Sucrose Cell Culture Tested	TC048-500G TC048-1KG TC048-5KG
Sucrose Meets USP and EP testing Specifications	TC048M-500G TC048M-1KG TC048M-5KG



Who are Our Customers ?

- Research Labs
- Stem Cell Banking
- IVF
- Vaccine manufacturing
- Cell culture Preservation
- Biopharma
- All former NutriFreez customers

Thank You