



Product Profile

Product Name:	Low-Protein Media, BSA-Free (LPM) without L-Glutamine
Product Catalog Number	05-040-1
Unit Size Availability:	(A)500ml:(B)100ml
Formulation:	Red-Colored Solution
Optimal Storage Conditions:	2-8°C
Stability: (Under Specified Handling & Storage)	Please Refer to the Product Label

Important Note! Please read the MSDS and Product Profile carefully in their entirety before using this material for possible safety precautions and potential hazards.

Product Description

LPM, is a BSA-Free and serum-free medium designed and modified with respect to protein content which is less than 18µg/ml and without L-Glutamine. It is totally free of Bovine Serum Albumin (BSA). The removal of serum and/or other animal-derived constituents for all intents and purposes can be summed up five-fold into the following major categories:

- ◆ The High Cost of Serum & Its Components
- ◆ The Inherent Biological & Source Variability and Variation of those Components
- ◆ The Introduction of Possible Contaminants & Toxic Elements To Cell Lines
- ◆ Down-Stream Processing & Final Purification
- ◆ Regulatory Issues Associated with Serum and its By-Products

In spite of the fact of its very low protein formulation, it has proven to be remarkably effective for the growth of a wide variety of Hybridomas and other lymphocytes. It has also been successfully utilized in the culture of human lymphocytes (i.e. including stimulated or transformed cells), Monoclonal Antibody Production (MAbP) as well as in the production of viruses.

Replacing serum necessitates taking into consideration all those possible factors that may affect proliferation of a particular cell type as all cell types have their own individual niche requirements. LPM, BSA-Free without L-Glutamine with its relatively lower protein content, typically represents the requirements for promoting cell growth without the worry of the often untoward effects of a BSA-supplemented medium. Often, the lower protein content in highly-defined cultures offers greater potential for specific cell growth while maintaining nearly equivalent product titers.

The absence of exotic growth factors make this medium coincide to fit your requirements and at the same time is more cost-efficient. It only requires the addition of L-Glutamine (a required essential amino acid in practically all cell culture media formulations) and antibiotics that are added to eliminate microbial contaminants but at lesser concentrations than in serum-supplemented media. Serum proteins have a tendency to bind with some of the supplemented antibiotic, so in a serum-free medium environment, the absence of these proteins may increase the vulnerability of certain cells to the pharmacokinetics of the antibiotics.

This serum-free (SF) medium also contains constituents that include a typical and wide variety of, but is not limited to, among others:

- ◆ Inorganic Salts
- ◆ Vitamins
- ◆ Amino Acids
- ◆ Glucose
- ◆ Human Transferrin¹
- ◆ Insulin, Human Recombinant
- ◆ Phenol Red

It does not contain L-Glutamine.

Some Predominant Characteristics of LPM include:

- § Ready-To-Use Formulation
- § Serum-Free
- § BSA-Free
- § Eliminates Serum-Screening Down-Time
- § More Precise Evaluation of Cell Function
- § Improves Cell Adaptation Time
- § Promotes Cell Performance and Productivity
- § More Uniform & Consistent Media Performance
- § Easier Product Purification & Downstream Processing
- § Sterile-Filtered(0.1µ), Cell-Culture and Endotoxin-Tested

Storage & Handling Precautions and Disclaimer

For *in vitro* diagnostic use only.

The product should be stored at 2-8°C. The product should not be left in the light for prolonged periods as it is light-sensitive. When stored in the dark under ideal conditions, the product is stable until the expiry date. As with any other liquid media formulations, deterioration of liquid media may be recognized by any of the following characteristics, among others including: (a). color change, (b). presence of clumping/flocculent debris/ granulation/ particulates/ precipitates or sediments (c). insolubility, (d). and/or decrease in expected performance parameters. Any material described above should not be used and therefore discarded.

Instructions/Procedure

- 1) Take a bottle from the proper storage conditions between 2-8°C and read the label.
- 2) Allow to warm to room temperature prior to use.
- 3) Ensure that the cap of the bottle is tight.
- 4) Gently swirl the solution in the bottle.
- 5) Wipe the outside of the bottle with a disinfectant solution such as 70% ethanol.
- 6) Using aseptic/sterile technique under a laminar-flow culture hood, work according to established protocols.

Quality Control

Test	Specification
Cell-Culture	Test and Record
Cell Line	Hybridoma Cells
Endotoxins	Test and Record
Osmolality	290-333 mOsm/kg
pH	7.2-7.5
Sterility	Sterile

Auxiliary Products

Product Name	Catalog Number	Storage Temperature
L-Glutamine Solution	03-020-1	-20°C
Alanyl-Glutamine Solution	03-022-1	-20°C
DCCM-1 without L-Glutamine	05-010-1	2-8°C
DCCM-1 10X Conc., without L-Glutamine, without Sodium Bicarbonate	05-010-5	2-8°C
DCCM-2 without L-Glutamine	05-015-1	2-8°C
DCCM-2 10X Conc., without L-Glutamine, without Sodium Bicarbonate	05-015-5	2-8°C
Low Protein Medium BSA-Free(LPM) 10X Conc., without L-Glutamine, without Sodium Bicarbonate	05-040-5	2-8°C
BIOINSECT-1, with Glutamine	05-050-1	2-8°C
BIO-MPM-1, Multi-Purpose SFM, without L-Glutamine	05-060-1	2-8°C
BIOCHO-1 Serum-Free Medium Base without L-Glutamine	05-061-1	2-8°C
BIOCHO-2 Serum-Free Medium Base without L-Glutamine	05-062-1	2-8°C
Serum-Free Cell Freezing Medium	05-065-1	2-8°C
NutriVero VP1™ AnimalComponent-Free Medium for the Monolayer Culture of Vero Cells(NutriVero VP1,ACF SFM)	05-066-1	2-8°C
NutriVero VP2™ AnimalComponent-Free Medium for the Microcarrier Suspension Culture of Vero Cells(NutriVero VP1,ACF SFM)	05-067-1	2-8°C
Nutristem™hESC Xeno-Free Serum-Free Medium for Human Embryonic Stem Cells with HSA	05-100-1	2-8°C
AF Nutristem™hESC Xeno-Free Serum-Free Medium for Human Embryonic Stem Cells without HSA	05-102-1	2-8°C
Mesenchymal Stem Cell Growth Medium(Ready-To-Use)	05-300-1	Please See Product labels
Mesenchymal Stem Cell Adipogenic Differentiation Medium (Ready-To-Use)	05-301-1	Please See Product labels
Mesenchymal Stem Cell Chondrogenic Differentiation Medium (Ready-To-Use)	05-302-1	Please See Product labels
Mesenchymal Stem Cell Osteogenic Differentiation Medium(Ready-To-Use)	05-303-1	Please See Product labels
BIOGRO-1 Serum-Free Medium Supplement 50X Conc.	05-600-1	-20°C
BIOGRO-2 Serum-Free Medium Supplement 50X Conc.	05-610-1	-20°C
BIOGRO-CHO Serum-Free Medium Supplement 100X Conc.	05-620-1	-20°C
Human Serum Albumin(HSA) Solution,10%, Optimized for Human Embryonic Stem Cells(hESC)	05-720-1	-20°C

References:

1) Human Transferrin, Fe-Free is manufactured under GMP conditions from Human Blood Plasma sub Fraction IV-1. It is important to emphasize that it is "For Research, Laboratory or Further Manufacturing Purposes Only." It is not intended For Human Use. The production process included heat treatment at 60°C for 10 Hours. It is a USA-sourced and approved product and plasma donors undergo a rigorous selection process as per USDA requirements.

In addition, source material plasma units have been tested as per US FDA-approved or accepted testing for the presence of:

- Anti (Human Immunodeficiency Virus) HIV-1/2
- Anti HIV
- HBsAg
- HCV,HBV,HAV,HIV-1, and Parvovirus B-19 by NAT (Minipools of 16v Donations)
- Syphilis

In addition, the plasma pool is also tested for the presence of:

- Anti HIV-1/2
- Anti HIV
- HBsAg
- HCV by Nucleic Acid Testing(NAT)
- HIV-1 by NAT
- HBV by NAT
- HAV by NAT(In-Process Only)
- Parvovirus B-19 by NAT

2)Biological Industries (BI)Specifications

3)Darling, D.C. and Morgan S.J. Animal Cells: Culture and Media, John Wiley & Sons, New York, 1994

4)Biological Industries (BI) Product Guide, "Serum-Free Medium," p.3.