BioArtha Labs PVT LTD
Unit 2, Plot #R-11, 1st Cross,
KSSIDC Industrial Estate
Bommasandra 2nd Stage,
Yarandahalli Jigani Rd Bangalore,
Karnataka -560099 (India)
info@bioarthalabs.com

DATA SHEET

Rev.ver: 01

1. Identification

Product Name: **Nutrient Mixture F-10 Ham**
With Sodium bicarbonate,25mM HEPES buffer and L-Glutamine

Catalog.no: **CCML096**

2. Description

Nutrient Mixture F-10 (Ham's F-10) Medium, developed by R. G. Ham, was originally designed for the clonal growth of Chinese Hamster Ovary (CHO) cells and other mammalian cells under serum-free or reduced-serum conditions. This medium provides a rich and balanced formulation that supports the growth of a broad spectrum of mammalian cell types, including fibroblasts, primary cells, and established lines.

Ham's F-10 contains a wide variety of nutrients, including higher concentrations of amino acids, vitamins, and additional growth factors compared to earlier basal media. It also includes hypoxanthine and thymidine to support the synthesis of nucleic acids and promote vigorous cell proliferation. The formulation's precise balance of glucose, salts, and trace elements makes it suitable for both adherent and suspension cultures.

Widely used for the culture of CHO, WI-38, primary rat liver, and other fastidious cells, F-10 medium is also employed in hybridoma culture and in serum-reduced systems where cell viability and productivity are critical. The medium may be further supplemented with L-glutamine, sodium bicarbonate, and fetal bovine serum depending on the specific requirements of the cell type.

3. Storage/Stability

Appearance	Light pink colored, clear solution.
CO_2 concentration, optimum	5.0 %
Storage and shelf life	Store at +2°C to +8°C protected from light. Shelf life of 1 years.
Shipping conditions	Ambient

4. Formulation

Components	**Concentration (mg/L)**
Amino Acids	
Glycine	7.5
L-Alanine	8.9
L-Arginine hydrochloride	211
L-Asparagine-H_2O	15.01
L-Aspartic acid	13.3
L-Cysteine hydrochloride-H_2O	35.12
L-Glutamic Acid	14.7

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Components	**Concentration (mg/L)**
L-Glutamine	146
L-Histidine hydrochloride-H_2O	21
L-Isoleucine	2.6
L-Leucine	13.1
L-Lysine hydrochloride	29.3
L-Methionine	4.5
L-Phenylalanine	5
L-Proline	11.5
L-Serine	10.5
L-Threonine	11.9
L-Tryptophan	0.6
L-Tyrosine disodium salt dihydrate	2.61
L-Valine	3.5
Vitamins	
Biotin	0.024
Choline chloride	0.698
D-Calcium pantothenate	0.715
Folic Acid	1.32
Niacinamide	0.615
Pyridoxine hydrochloride	0.206
Riboflavin	0.376
Thiamine hydrochloride	1.0
Vitamin B12	1.36
i-Inositol	0.541
Inorganic Salts	
Calcium Chloride ($CaCl_2$-$2H_2O$) (dihydrate.)	44.1
Cupric sulfate ($CuSO_4$-$5H_2O$)	0.0025
Ferric sulfate ($FeSO_4$-$7H_2O$)	0.834
Magnesium sulfate (anhydrous)	74.64
Potassium Chloride (KCl)	285.0
Potassium phosphate monobasic	83.0
Sodium Chloride (NaCl)	7400.0
Sodium bicarbonate	1200.000
Sodium Phosphate dibasic (Na_2HPO_4) anhydrous	153.7
Zinc sulfate ($ZnSO_4$-$7H_2O$)	0.0288
Other Components	
Hypoxanthine Na	4.08
Lipoic Acid	0.21
Thymidine	0.73
Sodium Pyruvate	110
D-Glucose (Dextrose)	1100.0
HEPES buffer	5958.0
Phenol Red sodium salt	1.3

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