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-12 Ham, Kaighn's Modification**

w/o L-Glutamine and Sodium bicarbonate

Catalog.no: **CCMP099**

2. Description

Ham's Nutrient Mixtures were originally developed to support clonal growth of several clones of Chinese Hamster Ovary (CHO) cells, as well as clones of HeLa and mouse L-cells. Ham's F-12 has been used for the growth of primary rat hepatocytes and rat prostate epithelial cells. A clonal toxicity assay using CHO cells has also been reported with Ham's F12 as the medium of choice.

3. Storage/Stability

Appearance	White to off white powder.
CO_2 concentration, optimum	5.0 %
Storage and shelf life	Store at +2°C to +8°C protected from light. Shelf life of 3 years.
Shipping conditions	Ambient

4. Formulation

Components	**Concentration (mg/L)**
Amino Acids	
Glycine	15.01
L-Alanine	17.8
L-Arginine hydrochloride	421.4
L-Asparagine-H_2O	30.02
L-Aspartic acid	26.62
L-Cysteine hydrochloride-H_2O	70.24
L-Glutamic Acid	29.42
L-Histidine hydrochloride-H_2O	42
L-Isoleucine	7.872
L-Leucine	26.24
L-Lysine hydrochloride	73
L-Methionine	9
L-Phenylalanine	10
L-Proline	69.06
L-Serine	21
L-Threonine	23.82
L-Tryptophan	4.08
L-Tyrosine disodium salt dihydrate	13.5
L-Valine	23.42

Components	Concentration (mg/L)
Vitamins	
Biotin	0.073
Choline chloride	14
D-Calcium pantothenate	0.477
Folic Acid	1.32
Niacinamide	0.037
Pyridoxine hydrochloride	0.061
Riboflavin	0.037
Thiamine hydrochloride	0.337
Vitamin B12	1.4
i-Inositol	18
Inorganic Salts	
Calcium Chloride ($CaCl_2$-$2H_2O$)	135.24
Cupric sulfate ($CuSO_4$-$5H_2O$)	0.0025
Ferric sulfate ($FeSO_4$-$7H_2O$)	0.834
Disodium hydrogen phosphate	115.020
Magnesium Chloride (anhydrous)	49.7
Magnesium sulphate anhydrous	93.700
Potassium Chloride (KCl)	283.290
Sodium Chloride (NaCl)	7597.2
Potassium dihydrogen phosphate	58.500
Zinc sulfate ($ZnSO_4$-$7H_2O$)	0.1437
Other Components	
Hypoxanthine Na	4.083
Lipoic Acid	0.21
Putrescine 2HCl	0.322
Thymidine	0.726
Sodium Pyruvate	220
D-Glucose (Dextrose)	1260
Phenol Red	3.318

5. Procedure

Preparation of 1-liter liquid medium:

1. Suspend 10.8 g in 900 ml cell culture grade water with constant, gentle stirring until the powder is completely dissolved. Do not heat the water.
2. Add 2.5 g of sodium bicarbonate powder or 33.3ml of 7.5% sodium bicarbonate solution for 1 liter of medium and 292gms of L-glutamine or 10ml of 200mM L-Glutamine solution and stir until dissolved.
3. Adjust the pH to 0.2 to 0.3 pH units below the desired pH using 1 N HCl or 1 N NaOH since the pH tends to rise during filtration.
4. Add cell culture grade water up to the final volume of 1000 ml
5. Sterilize the medium immediately by filtering through a sterile membrane filter with porosity of 0.22 micron or less, using positive pressure rather than vacuum to minimize the loss of carbon dioxide.
6. Aseptically add sterile supplements as required and dispense the desired amount of sterile medium into sterile containers.
7. Store liquid medium at +2°C to +8°C and in dark until use.