

Rev.ver: 01

1. Identification

Product name	Nutrient Mixture F-12 Ham, Kaighn's Modification w/L-Glutamine and 2.5 gms per litre Sodium bicarbonate
Catalog No	CCML105

2. Description

Ham's Nutrient Mixtures were originally formulated to support single-cell plating of near-diploid Chinese Hamster Ovary (CHO) cells and mouse L-cells. Among these, Ham's Nutrient Mixture F-12 was specifically developed for the serial propagation and cloning of two CHO cell lines—CHD-3 and CHL-1—as well as mouse L-cells. This medium is widely preferred for the cultivation of rodent-derived cells, cloning of myeloma and hybridoma cells, and conducting clonal toxicity assays using CHO cells.

3. Product Specifications

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. Once opened, store at 4°C and use within 6-8 weeks.
Shipping conditions	Ambient

4. Formulation

Components	Concentration mg/L
Amino Acids:	
L-Alanine	17.800
L-Arginine HCl	421.400
L-Asparagine monohydrate	30.020
L-Aspartic acid	26.620
L-Cysteine HCl	70.240
L-Glutamic Acid	29.420
L-Glutamine	292.200
Glycine	15.010
L-Histidine HCl H ₂ O	41.920
L-Isoleucine	7.872
L-Leucine	26.240
L-Lysine HCl	73.040
L-Methionine	8.960
L-Phenylalanine	9.920
L-Proline	69.060
L-Serine	21.020
L-Threonine	23.820
L-Tryptophan	4.080
L-Tyrosine 2Na 2H ₂ O	13.500
L-Valine	23.420
Vitamins:	
Choline chloride	13.960
Biotin	0.073
D-Calcium Pantothenate	0.477
Folic Acid	1.320
Nicotinamide	0.037
Riboflavin	0.0376

Components	Concentration mg/L
Pyridoxal HCl	0.061
i-Inositol	18.020
Thiamine HCl	0.337
Vitamin B12	1.355
Inorganic Salts	
CaCl ₂ 2H ₂ O	135.240
Copper Sulphate pentahydrate	0.0025
Fe(NO ₃) ₃ ·9H ₂ O	0.834
KCl	283.290
MgSO ₄ anhydrous	93.700
Magnesium chloride anhydrous	49.700
Sodium chloride	7597.200
Sodium Bicarbonate	2500.000
Disodium hydrogen phosphate	115.020
Potassium dihydrogen phosphate	58.500
Zinc sulphate heptahydrate	0.1437
Other Components:	
D-Glucose	1260.000
Phenol Red Sodium Salt	3.318
Sodium Pyruvate	220.000
Hypoxanthine sodium salt	4.083
Lipoic acid	0.2063
Putrescine dihydrochloride	0.322
Thymidine	0.726

5. Precautions and Disclaimer

This product is for research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.