

Technical Information

Nutrient Mixture F-12 Ham, Coon's Modification

With Sodium bicarbonate Without L-Glutamine 1X Liquid Cell Culture Medium

Product Code: AL1146

Application: Ham's Nutrient Mixtures were originally developed for single cell plating of near diploid Chinese hamster ovary (CHO) cells and mouse L-cells. Both F-10 and F-12 are formulated for use with or without serum, depending on the type of cells being cultured.

Ham's Nutrient Mixture F12 was originally designed for serial propagation and cloning of two CHO cell lines namely, CHD-3 and CHL-1 and mouse L cells. It is the medium of choice for the growth of cells of rodent origin and for cloning of myeloma and hybridoma cells. This medium is also the medium of choice for clonal toxicity assay using CHO cells.

Ham's Nutrient Mixture F12, Coon's modification was developed to determine optimal conditions for obtaining viable hybrids by treatment of parental cells with sendai virus. The medium was modified by doubling the concentration of amino acids and pyruvate and adding ascorbic acid.

AL1146 is Coon's modification of Nutrient Mixture F-12 Ham without L-glutamine. Users are advised to review the literature for recommendations regarding medium supplementation and physiological growth requirements specific for different cell lines.

Composition**

Ingredients	mg/Litre
INORGANIC SALTS	
Calcium chloride dehydrate	165.000
Copper sulphate pentahydrate	0.0025
Disodium hydrogen phosphate, anhydrous	132.040
Ferric sulphateheptahydrate	0.834
Magnesium chloride hexahydrate	106.000
Magnesium sulphate anhydrous	50.800
Potassium chloride	305.000
Potassium dihydrogen phosphate	68.000
Sodium bicarbonate	1176.000
Sodium chloride	7530.000
Zinc sulphateheptahydrate	0.144
AMINO ACIDS	
Glycine	16.000
L-Alanine	18.000
L-Arginine hydrochloride	422.000
L-Asparagine anhydrous	30.000
L-Aspartic acid	26.000
L-Cysteine hydrochloride	70.260
L-Glutamic acid	30.000
L-Histidine hydrochloride monohydrate	42.000
L-Isoleucine	7.800
L-Leucine	26.200
L-Lysine hydrochloride	73.000
L-Methionine	9.000
L-Phenylalanine	10.000
L-Proline	70.000
L-Serine	21.000

L-Threonine	23.800
L-Tryptophan	4.000
L-Tyrosine disodium salt	15.860
L-Valine	23.400
VITAMINS	
Biotin	0.0073
Choline chloride	13.960
D-Ca-Pantothenate	0.480
Folic acid	1.320
Nicotinamide	0.04
Pyridoxine hydrochloride	0.06
Riboflavin	0.04
Thiamine hydrochloride	0.340
Vitamin B12	1.360
i-Inositol	18.020
OTHERS	
D-Glucose	2000.000
Hypoxanthine sodium salt	4.040
Linoleic acid	0.09
Lipoic acid	0.206
Phenol red sodium salt	1.240
Putrescine dihydrochloride	0.300
Sodium pyruvate	220.100
Thymidine	0.700

Methodology

1. Add 10ml of 200mM L-glutamine (TCL1012) for 1 litre of medium.

Material required but not provided

L-Glutamine solution 200mM (TCL1012)

Quality control

Appearance

Orangish red colored, clear solution.

pH

7.00 -7.60

Osmolality in mOsm/Kg H₂O

320.00 -360.00

Sterility

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

Cultural Response

The growth promotion capacity of the medium is assessed qualitatively by analyzing the cells for the morphology and quantitatively by estimating the cell counts and comparing it with a control medium through minimum three subcultures.

Endotoxin Content

NMT 5EU/ml

Storage and Shelf Life

Store at 2-8°C away from bright light. Shelf life is 18 months. Use before expiry date given on the product label.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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