

### Technical Information

#### Nutrient Mixture F-12 Ham

With L-Glutamine and Sodium bicarbonate 1X Liquid Cell Culture Medium

#### Product Code: AL1025A

**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.

AL1025A is Nutrient Mixture F-12 Ham with L-glutamine and sodium bicarbonate. 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
<b>INORGANIC SALTS</b>	
Calcium chloride dihydrate	44.100
Copper sulphate pentahydrate	0.0025
Ferric sulphate heptahydrate	0.834
Magnesium chloride anhydrous	57.650
Potassium chloride	223.600
Sodium bicarbonate	1176.000
Sodium chloride	7599.000
Sodium phosphate dibasic anhydrous	142.040
Zinc sulphate tetrahydrate	0.863
<b>AMINO ACIDS</b>	
Glycine	7.500
L-Alanine	8.910
L-Arginine hydrochloride	210.700
L-Asparagine anhydrous	15.010
L-Aspartic acid	13.300
L-Cysteine hydrochloride	35.120
L-Glutamic acid	14.700
L-Glutamine	146.000
L-Histidine hydrochloride monohydrate	20.960
L-Isoleucine	3.940
L-Leucine	13.100
L-Lysine hydrochloride	36.500
L-Methionine	4.480
L-Phenylalanine	4.960
L-Proline	34.500
L-Serine	10.500
L-Threonine	11.900
L-Tryptophan	2.040
L-Tyrosine disodium salt	7.810
L-Valine	11.700

### VITAMINS

Biotin	0.0073
Choline chloride	13.960
D-Ca-Pantothenate	0.480
Folic acid	1.320
Nicotinamide	0.037
Pyridoxine hydrochloride	0.062
Riboflavin	0.038
Thiamine hydrochloride	0.340
Vitamin B12	1.360
i-Inositol	18.000

### OTHERS

D-Glucose	1801.600
Hypoxanthine sodium salt	4.770
Linoleic acid	0.084
Lipoic acid	0.210
Phenol red sodium salt	1.240
Putrescine dihydrochloride	0.161
Sodium pyruvate	110.100
Thymidine	0.730

## Quality Control

### Appearance

Orangish red colored, clear solution.

### pH

7.00 -7.60

### Osmolality in mOsm/Kg H<sub>2</sub>O

280.00 -320.00

### 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 12 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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