

**Catalog Number:** M25350  
**Size:** 500 mL

## PRODUCT DESCRIPTION

Ham's Nutrient Mixture F-12, originally designed to support the serum-free growth of Chinese Hamster Ovary (CHO) cells, is used with serum supplementation for a variety of cell types. F-12 features higher concentrations of some components, as compared to Ham's F-10. F-12 includes including versions with HEPES buffer for a more effective buffering capacity.

Each lot of F-12 is prepared from a powdered base medium and tissue culture-grade water. Representative samples of each lot of F-12 are tested to confirm the absence of bacterial or fungal contamination using methods adapted from the current U.S. Pharmacopeia. F-12 is manufactured in our ISO 9001:2015 certified facility.

For the specific media formulation, please refer to the Media Formulation section of the datasheet.

## STORAGE AND HANDLING

F-12 is supplied in gamma-irradiated, sterile PETG or PETE bottles. We recommend that F-12 be stored at a temperature of 2-8 °C, and protected from strong light. Always use aseptic techniques when handling and supplementing F-12.

## PRECAUTION

When handling bio-hazardous materials such as human cells, safe laboratory procedures should be followed, and personal protective equipment should be worn.

## LIMITATIONS

- FOR LABORATORY RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES.
- The safety and efficacy of this product in diagnostic or other clinical uses has not been established.
- Results may vary due to variations among tissue/cells derived from different donors or sources.

# MEDIA FORMULATION

## INORGANIC SALTS mg/L

Calcium Chloride • 2H <sub>2</sub> O	44.10
Cupric Sulfate • 5H <sub>2</sub> O	0.0025
Ferrous Sulfate • 7H <sub>2</sub> O	0.834
Magnesium Chloride • 6H <sub>2</sub> O	122.01
Potassium Chloride	223.65
Sodium Chloride	7599.00
Sodium Phosphate, Dibasic (Anhydr.)	142.12
Zinc Sulfate • 7H <sub>2</sub> O	0.863

## AMINO ACIDS mg/L

L-Alanine	8.91
L-Arginine • HCl	210.70
L-Asparagine • H <sub>2</sub> O	15.01
L-Aspartic Acid	13.31
L-Cysteine • HCl • H <sub>2</sub> O	35.12
L-Glutamic Acid	14.70
Glycine	7.51
L-Histidine • HCl • H <sub>2</sub> O	20.96
L-Isoleucine	3.94
L-Leucine	13.12
L-Lysine • HCl	36.54
L-Methionine	4.48
L-Phenylalanine	4.96
L-Proline	34.53
L-Serine	10.51
L-Threonine	11.91
L-Tryptophan	2.04
L-Tyrosine • Na <sub>2</sub> • 2H <sub>2</sub> O	7.84
L-Valine	11.71

## VITAMINS mg/L

D-Biotin	0.0073
Choline Chloride	13.96
Folic Acid	1.32
myo-Inositol	18.02
Nicotinamide	0.037
D-Pantothenic Acid, Hemicalcium Salt	0.24
Pyridoxine • HCl	0.062
Riboflavin	0.038
Thiamine • HCl	0.34
Vitamin B12	1.36

## OTHER COMPONENTS mg/L

D-Glucose	1801.60
Hypoxanthine	4.04
Linoleic Acid	0.084
Lipoic Acid	0.206
Putrescine • 2HCl	0.161
Sodium Pyruvate	110.10
Thymidine	0.727
Sodium Bicarbonate	1176.00