Ham's F12 (HEPES) (Ham's Nutrients Mixture F12, HEPES Modification)

With L-Glutamine, 25 mM HEPES & Sodium Bicarbonate

Cat. No. CPF113 | Size: 500 ML / 1L

1. Product Description

Ham's F12 Medium was developed for the culture of CHO cells, supplemented with nutrients, growth factors, and hormones for reduced serum or serum-free use. Subsequently, it has been used to culture various cell lines by adding serum or mixing it with DMEM followed by serum addition. It is widely used as a basal medium for developing low-serum or serum-free media. This product (Cat. No. CPF113) contains HEPES, enabling a more stable pH buffering capacity during the culture period.

2. Composition

Amino Acids	mg/L
L-Alanine	8.90
L-Arginine-HCl	211.00
L-Asparagine-H_2O	15.00
L-Aspartic Acid	13.00
L-Cysteine-HCl-H_2O	35.00
L-Glutamic Acid	14.70
L-Glutamine	146.00
Glycine	7.50
L-Histidine-HCl-H_2O	21.00
L-Isoleucine	4.00
L-Leucine	13.00
L-Lysine-HCl	36.50
L-Methionine	4.50
L-Phenylalanine	5.00
L-Proline	34.50
L-Serine	10.50
L-Threonine	12.00
L-Tryptophan	2.00
L-Tyrosine-2Na-2H_2O	7.80
L-Valine	11.70

Vitamins & Salts	mg/L
Biotin	0.007
D-Ca Pantothenate	0.50
Choline Chloride	14.00
Folic Acid	1.30
i-Inositol	18.00
Niacinamide	0.04
Pyridoxine-HCl	0.06
Riboflavin	0.04
Thiamine-HCl	0.30
Vitamin B12	1.40
Inorganic Salts	**mg/L**
$CaCl_2$	33.20
$CuSO_4 \cdot 5H_2O$	0.0025
$FeSO_4 \cdot 7H_2O$	0.83
KCl	223.60
$MgCl_2$	57.22
Na_2HPO_4	142.00
NaCl	7599.00
$NaHCO_3$	1176.00
$ZnSO_4 \cdot 7H_2O$	0.86

Others	mg/L
D-Glucose	1802.00
HEPES	5958.00
Hypoxanthine, Sodium	4.77
Linoleic Acid	0.08
Lipoic Acid	0.21
Phenol Red	1.20
Putrescine-2HCl	0.161
Sodium Pyruvate	110.00
Thymidine	0.70

3. Product Quality Specifications

Appearance	pH	Osmolality	Endotoxin	Sterility
Pink clear liquid	pH 7.3 ± 0.3	315 ± 15 mOsm/kg H_2O	<1 EU/mL	Sterile

4. Storage Conditions and Precautions

Store at refrigerated temperatures (2~8°C) protected from direct light. The expiration date is indicated on the product label; do not use expired products. Product degradation may appear as precipitates, floating particles, turbidity, or color change; discard if any are observed. Storing against the inner walls of a refrigerator where temperatures may approach 0°C can cause degradation due to ice crystal formation. The addition of extra substances may also cause degradation.

5. Usage Instructions and Precautions

This product is a sterile solution. Open the cap only in a sterile environment (e.g., a clean bench) using aseptic technique. It is recommended to use the entire contents after opening; otherwise, aliquot into a suitable sterile container and store refrigerated (2~8°C).