Alpha MEM, Alpha Modification

(Minimum Essential Medium, Eagle, Alpha Modification)

Cat. No. CPA001

With Earle's Salts
With L-Glutamine
Without Deoxy-ribonucleosides and Ribonucleosides
With Sodium Bicarbonate

1. Product Description

Alpha MEM is a modification of Minimum Essential Medium (MEM) containing NEAA, pyruvate, lipoic acid, vitamin B12, biotin, and ascorbic acid. Widely used for both suspension and monolayer cultures of various animal cells, including keratinocytes, primary rat astrocytes, and human melanoma cells, as well as for the selection of DHFR-negative transformed cells.

2. Composition

Concentration: mg/L

Amino Acids	mg/L
L-Alanine	25.0
L-Arginine·HCl	126.4
L-Asparagine·H_2O	50.0
L-Aspartic Acid	30.0
L-Cysteine·HCl·H_2O	100.0
L-Cystine·2HCl	31.2
L-Glutamic Acid	75.0
L-Glutamine	292.0
Glycine	50.0
L-Histidine·HCl·H_2O	41.9
L-Isoleucine	52.5
L-Leucine	52.5
L-Lysine·HCl	72.5
L-Methionine	15.0
L-Phenylalanine	32.5
L-Proline	40.0
L-Serine	25.0
L-Threonine	47.6
L-Tryptophan	10.0
L-Tyrosine·2Na	52.0
L-Valine	46.8

Vitamins	mg/L
Ascorbic Acid	50.0
D-Ca Pantothenate	1.0
Biotin	0.1
Choline Chloride	1.0
Folic Acid	1.0
i-Inositol	2.0
Niacinamide	1.0
Pyridoxal·HCl	1.0
Riboflavin	0.1
Thiamine·HCl	1.0
Vitamin B12	1.4

Others

Others	mg/L
D-Glucose	1000.0
Lipoic Acid	0.2
Phenol Red	10.0
Sodium Pyruvate	110.0

Inorganic Salts	mg/L
$CaCl_2$	200.0
KCl	400.0
$MgSO_4$	97.7
NaCl	6800.0
$NaHCO_3$	2200.0
$NaH_2PO_4·H_2O$	140.0

3. Product Quality Specifications

Appearance	pH	Osmolality	Endotoxin	Sterility
Red clear liquid	pH 7.3 ± 0.3	299 ± 15 mOsm/kg H_2O	< 1 EU/mL	Sterile

4. Storage Conditions and Precautions

Protect from direct light and store refrigerated (2–8°C). 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.

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).