Alpha MEM with Nucleosides

Minimum Essential Medium Eagle - alpha modification (Alpha MEM) with nucleosides

Catalog # 36450 500 mL

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Product Description

Minimum Essential Medium Eagle - Alpha Modification (Alpha MEM) is recommended for a wide variety of cell culture applications. Selection of a suitable nutrient medium is dependent on the type of cell, culture conditions, and degree of chemical definition required for the cell culture application. MEM has typically been used for the culture of cells grown in monolayers; however, additional supplementation to Alpha MEM has expanded the applications for this medium.

MEM was developed by Harry Eagle when Basal Medium Eagle (BME) was found not adequate to support the growth of HeLa cells. It was discovered that BME could support the growth of a wider variety of cells with the addition of certain medium supplements (e.g. higher concentrations of amino acids), which were incorporated into the MEM formulation. Alpha modification of MEM includes the addition of the non-essential amino acids, sodium pyruvate, lipoic acid, ascorbic acid, biotin, and vitamin B12.

See Formulation on page 2 for a full list of components.

Properties

Storage: Store at 2 - 8°C.
Shelf Life: Stable for 12 months from date of manufacture (MFG) on label.

Handling / Directions For Use

This product contains the labile amino acid L-glutamine, which has a half-life of approximately 1 month when stored at 2 - 8°C. For certain cell culture applications, medium stored for greater than 2 months following date of manufacture should be supplemented with additional L-glutamine. Add 5 mL of 200 mM L-Glutamine (Catalog #07100) to 500 mL of Alpha MEM with Nucleosides to achieve a final concentration of 2 mM.

NOTE: This product does not contain antibiotics. If desired, add antibiotics and use within 1 week.

Formulation

INORGANIC SALTS	mg/L
Calcium Chloride ($CaCl_2$) (anhydrous)	200
Magnesium Sulfate ($MgSO_4$) (anhydrous)	97.67
Potassium Chloride (KCl)	400
Sodium Chloride (NaCl)	6800
Sodium Phosphate Monobasic ($NaH_2PO_4 \bullet H_2O$)	140
AMINO ACIDS	**mg/L**
L-Alanine	25
L-Arginine•HCl	126
L-Asparagine•H_2O	50
L-Aspartic Acid	30
L-Cysteine•HCl•H_2O	100
L-Cystine•2HCl	31.28
L-Glutamic Acid	50
L-Glutamine	292
Glycine	50
L-Histidine•HCl•H_2O	41.88
L-Isoleucine	52.5
L-Leucine	52.4
L-Lysine•HCl	72.47
L-Methionine	15
L-Phenylalanine	32
L-Proline	40
L-Serine	25
L-Threonine	48
L-Tryptophan	10
L-Tyrosine•2Na•2H_2O	51.9
L-Valine	46
VITAMINS	**mg/L**
L-Ascorbic Acid	50
d-Biotin	0.1
D-Calcium Pantothenate	1
Choline Chloride	1
Folic Acid	1
Myo-Inositol	2
Niacinamide	1
Pyridoxal•HCl	1
Riboflavin	0.1
Thiamine•HCl	1
Vitamin B12	1.36
OTHER	**mg/L**
Adenosine	10
Cytidine	10
2'-Deoxyadenosine•H_2O	10
2'-Deoxycytidine HCl	11
2'-Deoxyguanosine	10
D-Glucose	1000
Guanosine	10
Lipoic Acid	0.2
Phenol Red (Sodium)	11
Sodium Pyruvate	11
Thymidine	10
Uridine	10
Sodium Bicarbonate ($NaHCO_3$)	2200