

RECOMMENDED FOR:

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 type of cell, conditions of culture, and degree of chemical definition. MEM has typically been used for the cultivation of cells grown in monolayers, however additional supplementation to MEM (Alpha Modification) has expanded the applications for this medium.

Minimum Essential Medium (MEM) was developed by Harry Eagle when Basal Media 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 media 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.

PRODUCT DESCRIPTION:

The formulation of Alpha MEM is listed in Table 1 on the reverse side.

This product contains L-glutamine and is supplemented with Sodium Bicarbonate. This product does not contain antibiotics.

pH 7.2 - 7.6

This product is aseptically manufactured using tightly controlled processes and is sterility tested.

STABILITY AND STORAGE:

Store at 2 - 8°C.


Stable at 2 - 8°C for one year from date of manufacture as indicated on label (refer to Directions for Use for more information).

DIRECTIONS FOR USE:

This product contains the labile amino acid L-glutamine, which has a half-life of approximately one month when stored at 2 - 8°C. For certain cell culture applications, medium stored for greater than two 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 to achieve a final concentration of 2 mM L-glutamine.

If desired, add 5 mL of Penicillin G and Streptomycin Solution (100X, Catalog #07500) to each 500 mL bottle to achieve a final concentration of 100 U/mL of Penicillin and 100 µg/mL Streptomycin. Following addition of antibiotics, medium should be used within one week.

Product Information Sheet



MINIMUM ESSENTIAL MEDIUM EAGLE

Alpha Modification with Nucleosides

(Alpha MEM)

Catalog #36450 500 mL

**FOR RESEARCH ONLY.
NOT FOR THERAPEUTIC OR DIAGNOSTIC USE.**

StemCell Technologies

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Table 1. Formulation of Alpha MEM

COMPONENT	mg/L
INORGANIC SALTS	
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 ₂ PO ₄ ·H ₂ O)	140
AMINO ACIDS	
L-Alanine	25
L-Arginine HCl	126
L-Asparagine·H ₂ O	50
L-Aspartic Acid	30
L-Cysteine HCl·H ₂ O	100
L-Cystine 2HCl	31.28
L-Glutamic Acid	50
L-Glutamine	292
Glycine	50
L-Histidine HCl·H ₂ O	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 ₂ O	51.9
L-Valine	46
VITAMINS	
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	
Adenosine	10
Cytidine	10
2'-Deoxyadenosine·H ₂ O	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

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