

DATA SHEET

Rev.ver: 01

1. Identification

Product name	Minimum Essential Medium Eagle (MEM) (Alpha Modification) With Ribonucleosides and Deoxyribonucleosides L-Glutamine and Sodium Bicarbonate
Catalog.no	CCML091

2. Description

Minimum Essential Medium Eagle Alpha Modification (α -MEM) is an improved version of Eagle's Minimum Essential Medium (MEM), developed to support the growth and maintenance of a broader range of mammalian cell types. α -MEM was formulated by Clifford P. Stanners and colleagues as a modification of MEM to better support the proliferation of fastidious cells with higher nutritional requirements, including certain subtypes of fibroblasts, bone marrow cells, and primary cells.

This medium contains non-essential amino acids, sodium pyruvate, vitamins, and additional components such as nucleosides, which enhance cell growth and viability compared to standard MEM. The inclusion of these supplements provides a more balanced and complete nutrient profile, promoting robust growth, higher cell density, and extended viability in culture.

α -MEM supports the cultivation of a wide variety of adherent and suspension cells and is particularly suitable for bone-derived cells, mesenchymal stem cells, fibroblasts, and hybridoma cells. It can be supplemented with fetal bovine serum (FBS), glutamine, and antibiotics as required by specific cell types.

3. Product Specifications

Appearance	Orangish red colored, clear solution.
CO ₂ concentration, optimum	5.0 %
Storage and shelf life	Store at +2°C to +8°C protected from light.
Shipping conditions	Ambient

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4. Formulation

Components	Concentration mg/L
Amino Acids:	
Glycine	50.0
L-Alanine	25.0
L-Arginine HCl	126.0
L-Asparagine monohydrate	50.0
L-Aspartic acid	30.0
L-Cysteine hydrochloride	100.0
L-Cystine 2HCl	31.3
L-Glutamic acid	75.0
L-Glutamine	292.0
L-Histidine HCl H ₂ O	42.0
L-Isoleucine	52.0
L-Leucine	52.0
L-Lysine HCl	72.50
L-Methionine	15.0
L-Phenylalanine	32.0
L-Proline	40.0
L-Serine	25.0
L-Threonine	48.0
L-Tryptophan	10
L-Tyrosine 2Na 2H ₂ O	51.9
L-Valine	46.0
Vitamins:	
Choline chloride	1.0
D-Pantothenic acid • ½Ca	1.0
D-Biotin	0.10
Folic Acid	1.0

Components	Concentration mg/L
L-Ascorbic acid	50.0
myo-Inositol	2.0
Nicotinamide	1.0
Pyridoxal HCl	1.0
Riboflavin	0.10
Thiamine HCl	1.0
Vitamin B12	1.360
Inorganic Salts	
CaCl ₂ 2H ₂ O	265
MgSO ₄ (anhydrous)	97.72
NaHCO ₃	2200
KCl	400
NaCl	6800
NaH ₂ PO ₄ (anhydrous)	122
Other Components:	
D-Glucose	1000.0
2' Deoxyadenosine	10.0
2' Deoxycytidine hydrochloride	11.0
2' Deoxyguanosine	10.0
Adenosine	10.0
Cytidine	10.0
Guanosine	10.0
Lipoic acid	0.20
Thymidine	10.0
Uridine	10.0
Sodium pyruvate	110.0
Phenol red sodium salt	11.0

5. Precautions and Disclaimer

This product is for research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.