EMEM (MEM Eagle), w: 2 mM L-Glutamine, w: 2.2 g/L NaHCO3, w: EBSS

820100a

Eagle's Minimum Essential Medium (EMEM) is one of the most widely used basal media for the cultivation of a broad range of mammalian cells, particularly adherent cell lines. Originally developed by Harry Eagle, this classic formulation contains the essential amino acids, vitamins, and inorganic salts required to support the growth of both primary cells and established cell lines under standard culture conditions. This ready-to-use, sterile-filtered liquid formulation is supplemented with Earle's Balanced Salt Solution (EBSS), 2 mM L-glutamine, D-glucose (1.0 g/L), and 2.2 g/L sodium bicarbonate ($NaHCO_3$), making it suitable for use in a CO_2-controlled incubator atmosphere (typically 5 % CO_2). The included phenol red acts as a pH indicator, allowing convenient visual monitoring of medium condition during cell culture.

Key Features

Classic Eagle's MEM formulation with Earle's Balanced Salt Solution (EBSS)
2 mM L-glutamine included – ready for immediate use
2.2 g/L sodium bicarbonate – buffered for 5 % CO_2 incubation
With D-glucose (1.0 g/L) as primary carbon source
With phenol red as pH indicator
Without HEPES and without sodium pyruvate
Sterile-filtered liquid medium, ready to use
pH 7.0 – 7.6

Typical Applications

EMEM supports the cultivation of a wide variety of mammalian cell lines, including HeLa, HEK 293, Vero, MRC-5, L-929, BHK-21, and many primary cells. Common applications include:

Routine maintenance and expansion of adherent cell lines
Virus propagation and vaccine production workflows
Cytotoxicity and bioassay applications
Transfection and protein expression studies
Foundational research in cell biology and molecular biology

For optimal cell growth, EMEM is typically supplemented with 5–10 % fetal bovine serum (FBS) and, depending on the cell line, with non-essential amino acids (NEAA) and antibiotics such as penicillin/streptomycin.

Handling & Storage

Store the unopened bottle at +2 °C to +8 °C, protected from light. After opening, use under aseptic conditions. L-Glutamine in solution is subject to gradual degradation – we recommend using the medium within 4 weeks of opening for best performance, or supplementing with fresh L-glutamine prior to use if stored for longer periods. Allow the medium to warm to 37 °C before adding it to cells.

Quality

Manufactured under strict quality standards. Each batch is tested for sterility, pH, osmolality, and endotoxin levels to ensure consistent performance in cell culture applications.

Product Specifications

Specification
Detail
Product typeMEM
Product categoryCell culture media
FormatLiquid
SterileYes
Size500 ml
L-GlutamineWith L-glutamine (2 mM)
GlucoseWith glucose (1.0 g/L)
Sodium bicarbonateWith $NaHCO_3$ (2.2 g/L)
HEPESWithout HEPES
Sodium pyruvateWithout sodium pyruvate
Phenol redWith phenol red
Salt solutionEarle's Balanced Salt Solution (EBSS)
pH7.0 – 7.6
Endotoxin contentNot specified

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Banking information
Sparkasse Heidelberg
IBAN: DE35 6725 0020 0009 2076 86
BIC: SOLADES1HDB

Storage+2 °C to +8 °C
Formulation (Composition per Liter)

SPECIFICATIONS

Calcium chloride · 2H2O	265.00
Magnesium sulfate	97.72
Potassium chloride	400.00
Sodium chloride	6,800.00
Sodium dihydrogen phosphate, anhydrous	122.00
Sodium bicarbonate (NaHCO3)	2,200.00
L-Arginine · HCl	126.00
L-Cystine · 2HCl	31.30
L-Glutamine	292.00
L-Histidine · HCl · H2O	42.00
L-Isoleucine	52.00
L-Leucine	52.00
L-Lysine · HCl	72.50
L-Methionine	15.00
L-Phenylalanine	32.00
L-Threonine	48.00
L-Tryptophan	10.00
L-Tyrosine · 2Na · 2H2O	51.90
L-Valine	46.00
D-Calcium pantothenate	1.00
Choline chloride	1.00
Folic acid	1.00
myo-Inositol	2.00
Nicotinamide	1.00
Pyridoxal · HCl	1.00
Riboflavin	0.10
Thiamine · HCl	1.00
D(+)-Glucose	1,000.00
Phenol red	10.00

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