

Product Information

Minimum Essential Medium (MEM), originally developed by Henry Eagle, MEM contains no proteins, lipids, or growth factors. Therefore, MEM requires supplementation, commonly with 10% Fetal bovine serum (FBS). MEM includes higher concentration of Amino acids so as to closely approximate the protein composition of cultured mammalian cells. MEM can be used either with Earle's salts or Hank's salts and can also be additionally supplemented with Non-essential Amino acids (NEAA). This medium can be further modified by eliminating Calcium to facilitate growth of cells in suspension cultures.

RBMEM01 is supplemented with 1.0gm/L Glucose, L-Glutamine, Sodium bicarbonate and Phenol red. The media is formulated without Sodium pyruvate and HEPES.

Applications

Minimum Essential Medium (MEM) is a commonly-used classical cell culture medium and is used for culture of several suspension and adherent cells, including Vero, HeLa, BHK-21, HEK-293, MCF-7 etc.

Storage temperature	2-8°C, protect from light
Shelf life	12 months

Quality Control

Appearance	Orangish red, clear liquid
pH	7.0 -7.6
Osmolality	280–320 mOsm/kg
Sterility ¹	Sterile
Endotoxin ²	< 1.0 EU/ml
Cell culture test ³	Meets the requirements
Mycoplasma contamination ⁴	Negative

Note:

¹Sterility Testing (Bacterial and Fungal) carried out in accordance with < USP 71 >

²Bacterial endotoxin testing carried out in accordance with < USP 85 >

³Indicative cell line was seeded in complete control medium and complete test medium in a 96-well plate in triplicates and incubated at 37°C in a 5% CO₂ environment. Growth rates and viability of the cells in test medium must be comparable to the cultures grown in control medium.

⁴Mycoplasma test carried out using a real time PCR-based kit.

Composition

Components	Concentration (mg/L)
Amino Acids	
L-Arginine hydrochloride	126
L-Cystine dihydrochloride	31
L-Glutamine	292
L-Histidine hydrochloride-monohydrate	42
L-Isoleucine	52
L-Leucine	52
L-Lysine hydrochloride	73
L-Methionine	15
L-Phenylalanine	32
L-Threonine	48
L-Tryptophan	10
L-Tyrosine disodium salt dihydrate	52
L-Valine	46
Vitamins	
Choline chloride	1
D-Calcium pantothenate	1
Folic acid	1
i-Inositol	2
Niacinamide	1
Pyridoxal hydrochloride	1
Riboflavin	0.1
Thiamine hydrochloride	1

Components	Concentration (mg/L)
Inorganic Salts	
Calcium chloride (anhyd.)	200
Magnesium sulfate (anhyd.)	97.67
Potassium chloride	400
Sodium bicarbonate	2200
Sodium chloride	6800
Sodium phosphate monobasic	140
Other Components	
D-Glucose (Dextrose)	1000
Phenol red sodium salt	10