MEM

(Minimum Essential Medium, Eagle)

Cat. No. CPM104

With Earle's Salts
With Sodium Bicarbonate
Without L-Glutamine
Without Phenol Red

1. Product Description

MEM is an improvement over BME developed by Harry Eagle, featuring enhanced amino acid concentrations that serve as the basis for Alpha-MEM, DMEM, and others. MEM is used for culturing various cell lines such as HeLa, BHK21, 293, HT-1080, and MCF-7. It contains Earle's Salts for pH maintenance in a CO_2 incubator. This product does not contain L-glutamine, which can be added at 2 mM if needed, and is formulated without phenol red for assays where phenol red interference must be avoided.

2. Composition

Concentration: mg/L

Amino Acids	mg/L
L-Arginine·HCl	126.00
L-Cystine·2HCl	31.28
L-Glutamine	—
L-Histidine·HCl·H_2O	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	51.90
L-Valine	46.00

Vitamins & Others	mg/L
D-Ca Pantothenate	1.00
Choline Chloride	1.00
Folic Acid	1.00
i-Inositol	2.00
Niacinamide	1.00
Pyridoxal·HCl	1.00
Riboflavin	0.10
Thiamine·HCl	1.00
D-Glucose	1000.00
Phenol Red	—
HEPES	—

Inorganic Salts	mg/L
$CaCl_2$	200.00
KCl	400.00
$MgSO_4$	97.67
NaCl	6800.00
$NaHCO_3$	2200.00
$NaH_2PO_4·H_2O$	140.00

3. Product Quality Specifications

Appearance	pH	Osmolality	Endotoxin	Sterility
Light yellow clear liquid	pH 7.3 ± 0.3	285 ± 15 mOsm/kg H_2O	< 1 EU/mL	Sterile

4. Storage Conditions and Precautions

Protect from direct light and store refrigerated (2–8°C). Product degradation may appear as precipitates, floating particles, turbidity, or color change; discard if any are observed. Storing against the inner walls of a refrigerator where temperatures may approach 0°C can cause degradation.

5. Usage Instructions and Precautions

This product is a sterile solution. Open the cap only in a sterile environment (e.g., a clean bench) using aseptic technique. It is recommended to use the entire contents after opening; otherwise, aliquot into a suitable sterile container and store refrigerated (2–8°C).