Product sheet

EMEM (MEM Eagle), w: 2 mM L-Glutamine, w: 2.2 g/L NaHCO 3, w: EBSS | 820100a

One of the most widely used synthetic cell culture media is Minimum Essential Medium Eagle (MEM). Developed by Harry Eagle, this medium was first introduced in 1959 and has since become a popular choice for various cell types grown in monolayers and adherent cell lines.

What's in EMEM?

EMEM is a modified version of Eagle's minimum essential medium, containing Earle's Balanced Salt Solution, non-essential amino acids, L-glutamine, sodium pyruvate, and sodium bicarbonate. It's important to note that this level of sodium bicarbonate is intended for use in 5% CO2 in the air. To maintain its effectiveness, storing the medium at 2°C to 8°C in the dark when not in use is recommended.

What is EMEM used for?

Eagle's minimal essential medium (EMEM) is a cell culture medium that can maintain cells in tissue culture. The medium contains higher concentrations of amino acids, allowing for a more accurate approximation of the protein composition of cultured mammalian cells. EMEM may be used to cultivate various cells, including fibroblasts, human liver cancer cell line (HepG2) cells and human fetal brain progenitor-derived astrocyte cells (PDA). It is typically used in the presence of fetal bovine serum (FBS), calf, or horse sera.

How is EMEM different from other cell culture media?

While EMEM and Dulbecco's modified Eagle's medium (DMEM) share some similarities, they also differ. Both media lack protein and contain the amino acids, salts, glucose, and vitamins required to provide a cell with energy and maintain it in tissue culture. However, the DMEM formulation is modified to contain up to four times more vitamins and amino acids and two to four times more glucose than EMEM. It's worth noting that EMEM is also different from the original MEM formulation.

Quality Control

- Sterile-filtered

Storage and Shelf Life

- Store at +2°C to +8°C, protected from light.
- Once opened, store at 4°C and use within 6–8 weeks.

Shipping Conditions

- Ambient temperature

Maintenance

- Keep refrigerated at +2°C to +8°C in the dark. Avoid freezing and frequent warming to +37°C, as it reduces product quality.
- Do not heat the medium beyond 37°C or use uncontrolled heat sources such as microwave appliances.
- If only part of the medium is to be used, remove the required amount and warm it to room temperature before use.

Composition

Category	Components	Concentration (mg/L)
Amino Acids	L-Arginine HCl	126.00
	L-Cystine 2 HCl	31.30
	L-Glutamine	292.00

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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 2 Na 2 H_2O	51.90		
L-Valine	46.00		
Vitamins	Choline Chloride	1.00	
Vitamins	D-Calcium Pantothenate	1.00	
	Folic Acid	1.00	
	myo-Inositol	2.00	
	Nicotinamide	1.00	
	Pyridoxal HCl	1.00	
	Riboflavin	0.10	
	Thiamine HCl	1.00	
	Inorganic Salts	$CaCl_2$ 2 H_2O	265.00
Inorganic Salts	KCl	400.00	

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$MgSO_4$	97.67	
NaCl	6800.00	
$NaHCO_3$	2200.00	
NaH_2PO_4	122.00	
Other Components	D-Glucose	1000.00
Other Components	Phenol Red Sodium Salt	11.00