

# Minimum Essential Medium Eagle (MEM)

With Hank's salts and Sodium bicarbonate  
Without L-Glutamine  
1X Liquid Cell Culture Medium

**Product Code: AL056**

## Product Description :

Minimum Essential Medium (MEM) is a modification of Basal Medium Eagle (BME). It was developed by Harry Eagle to meet the specific nutritional requirements of certain subtypes of HeLa cells and normal mammalian fibroblasts. 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.

AL056 is Minimum Essential Medium with Hank's balanced salts and sodium bicarbonate. Hank's salt mixture is designed to equilibrate with air, hence does not require CO<sub>2</sub> air mixture. Cells can therefore be grown in AL056 in less CO<sub>2</sub> or CO<sub>2</sub> free environment. It does not contain L-glutamine. Users are advised to review the literature for recommendations regarding medium supplementation and physiological growth requirements specific for different cell lines.

## Composition :

Ingredients	mg/L
<b>INORGANIC SALTS</b>	
Calcium chloride dihydrate	185.410
Magnesium sulphate anhydrous	97.720
Potassium chloride	400.000
Potassium phosphate monobasic	60.000
Sodium bicarbonate	350.000
Sodium chloride	8000.000
Sodium phosphate dibasic anhydrous	47.800
<b>AMINO ACIDS</b>	
L-Arginine hydrochloride	126.000
L-Cystine dihydrochloride	31.300
L-Histidine hydrochloride	42.000
L-Isoleucine	52.000
L-Leucine	52.000

L-Lysine hydrochloride	72.500
L-Methionine	15.000
L-Phenylalanine	32.000
L-Threonine	48.000
L-Tryptophan	10.000
L-Tyrosine disodium salt	51.900
L-Valine	46.000
<b>VITAMINS</b>	
Choline chloride	1.000
D-Ca-Pantothenate	1.000
Folic acid	1.000
Nicotinamide	1.000
Pyridoxal hydrochloride	1.000
Riboflavin	0.100
Thiamine hydrochloride	1.000
i-Inositol	2.000
<b>OTHERS</b>	
D-Glucose	1000.000
Phenol red sodium salt	11.000

## Directions :

1. Add 10ml of 200mM L-glutamine (TCL012) for 1 litre of medium.

## Material required but not provided :

L-Glutamine solution 200mM (TCL012)

## Quality Control:

### Appearance

Red colored, clear solution.

### pH

7.00 -7.60

### Osmolality in mOsm/Kg H<sub>2</sub>O

290.00 -330.00

### Sterility

No bacterial or fungal growth is observed after 14 days of incubation, as per USP specification.

**Cultural Response**

The growth promotion capacity of the medium is assessed qualitatively by analyzing the cells for the morphology and quantitatively by estimating the cell counts and comparing it with a control medium through minimum three subcultures.

**Endotoxin Content**

NMT 5EU/ml

**Storage and Shelf Life:**

Store at 2-8°C away from bright light.

Shelf life is 18 months.

Use before expiry date given on the product label.

Revision : 1 / 2011

**Disclaimer :**

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