



## Minimum Essential Medium Eagle (MEM) 10X

With Hanks' salts

Without L-Glutamine and Sodium bicarbonate

**Product Code: AL190**

### 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 Hanks' 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.

AL190 is 10X Minimum Essential Medium with Hanks' balanced salts. It does not contain L-glutamine and sodium bicarbonate. 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	1854.100
Magnesium sulphate anhydrous	977.200
Potassium chloride	4000.000
Potassium phosphate monobasic	600.000
Sodium chloride	80000.000
Sodium phosphate dibasic anhydrous	478.000
<b>AMINO ACIDS</b>	
L-Arginine hydrochloride	1260.000
L-Cystine dihydrochloride	313.000
L-Histidine hydrochloride monohydrate	420.000
L-Isoleucine	520.000
L-Leucine	520.000
L-Lysine hydrochloride	725.000
L-Methionine	150.000
L-Phenylalanine	320.000
L-Threonine	480.000

L-Tryptophan	100.000
L-Tyrosine disodium salt	519.000
L-Valine	460.000
<b>VITAMINS</b>	
Choline chloride	10.000
D-Ca-Pantothenate	10.000
Folic acid	10.000
Nicotinamide	10.000
Pyridoxal hydrochloride	1.000
Riboflavin	10.000
Thiamine hydrochloride	20.000
i-Inositol	
<b>OTHERS</b>	
D-Glucose	10000.000
Phenol red sodium salt	110.000

### Directions:

1. Add 4.7ml of 7.5% sodium bicarbonate solution (TCL013) and 10 ml of 200mM L-glutamine (TCL012) for 1 litre of 1X medium prior to use.

### Material required but not provided:

L-Glutamine solution 200mM (TCL012)  
 Sodium bicarbonate solution 7.5% (TCL013)  
 Tissue culture grade water (TCL010)

### Quality Control:

#### Appearance

Yellow to orange colored, clear solution

#### pH

5.40 -6.00

#### 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.

**Endotoxin Content**

NMT 1EU/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.

**Disclaimer :**

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