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Technical Datasheet

Minimum Essential Medium Eagle (MEM)

With Hanks' salts, L-Glutamine, 25mM HEPES buffer and Sodium bicarbonate

Product Code: AL075A

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.

AL075A is Minimum Essential Medium with Hanks' salts, L-glutamine, 25mM HEPES buffer and sodium bicarbonate. Hanks' salt mixture is designed to equilibrate with air, hence does not require CO2 air mixture. Cells can therefore be grown in AL075A in less CO_2 or CO_2 free environment. HEPES, a zwitterionic buffer having a pKa of 7.3 at 37ºC prevents the initial rise in pH that tends to occur at the initiation of a culture and increases the buffering capacity of the medium. 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
INORGANIC SALTS	
Calcium chloride dihydrate	185.000
Disodium hydrogen phosphate anhydrous	47.800
Magnesium sulphate anhydrous	97.720
Potassium chloride	400.000
Potassium dihydrogen phosphate	60.000
Sodium bicarbonate	350.000
Sodium chloride	8000.000
AMINO ACIDS	
L-Arginine hydrochloride	126.000
L-Cystine dihydrochloride	31.300
L-Glutamine	292.000
L-Histidine hydrochloride monohydrate	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 dihydrate	51.900
L-Valine	46.000
VITAMINS	
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
OTHERS	
D-Glucose	1000.000
Phenol red sodium salt	11.000
HEPES buffer	5958.00

Quality Control:

Appearance
Orangish red colored, clear solution

pH
7.00 -7.60

Osmolality in mOsm/Kg H_2O
335.00 -375.00

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 12 months.
Use before expiry date given on the product label.

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