

Product Information

Minimum Essential Medium

with Earle's Balanced Salts, with 2.0 mM L-glutamine, with 20 mM HEPES, with non-essential amino acids

CATALOG NO. 51417C

Description

Minimum Essential Medium with Earle's Balanced Salts (MEM) was developed by Harry Eagle as a result of his studies to determine the essential nutritional requirements of L cells and HeLa cells in culture. He demonstrated that these cells require 13 amino acids and seven vitamins to grow and reproduce *in vitro*. MEM is a modification of Eagle's earlier medium BME, containing higher concentrations of these essential nutrients. This medium has demonstrated the ability to support a variety of normal and transformed cells in culture. This medium contains Earle's Balanced Salts, which makes it suitable for use in atmospheres charged with CO₂ gas.

Minimum Essential Medium with Non-Essential Amino Acids (MEM/NEAA) is Eagle's original formulation, modified to include non-essential amino acids and 20 mM HEPES.

Precautions

Use aseptic technique when handling or supplementing this medium. This product is for further manufacturing use. THIS PRODUCT IS NOT INTENDED FOR HUMAN OR THERAPEUTIC USE.

Storage

Store medium protected from light at 2 to 8 C. Do not freeze. Do not use after the expiration date.

Indications of Deterioration

Medium should clear and free of particulates and flocculent material. Do not use if liquid media is cloudy or contains precipitate. Other evidence of deterioration may include color change, pH shift and degradation of physical or performance characteristics. Do not use the medium after the expiration date.

Formulation

Component (all components measured in mg/L)	
INORGANIC SALTS	
Calcium chloride anhydrous	200.000
Magnesium sulfate anhydrous	97.670
Potassium chloride	400.000
Sodium bicarbonate	840.000
Sodium chloride	6800.000
Sodium phosphate monobasic monohydrate	140.000
VITAMINS	
D-calcium pantothenate	1.000
Choline chloride	1.000
Folic acid	1.000
i-inositol	2.000
Niacinamide	1.000
Pyridoxal HCl	1.000
Riboflavin	0.100
Thiamine HCl	1.000
AMINO ACIDS	
L-alanine	8.900
L-arginine HCl	126.980
L-asparagine monohydrate	15.000
L-aspartic acid	13.300
L-cystine 2HCl	31.280
L-glutamic acid	14.700
L-glutamine	292.000
Glycine	7.500
L-histidine HCl monohydrate	41.880
L-isoleucine	52.000
L-leucine	52.000
L-lysine HCl	72.470
L-methionine	15.000
L-phenylalanine	32.000
L-proline	11.500
L-serine	10.500
L-threonine	48.000
L-tryptophan	10.000
L-tyrosine 2Na dihydrate	51.900
L-valine	46.000
OTHER	
Dextrose anhydrous	1000.000
HEPES free acid	4766.400
Phenol red sodium salt	10.620

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Preparation Instructions

Supplements, such as antibiotics, can be added to the sterilized solution using aseptic technique. Storage conditions and shelf life of the supplemented product may be affected by the nature of the supplements. Sterile serum should not be refiltered before or after being added to sterile medium because growth promoting capacity may be reduced upon refiltration.

Characteristics

Appearance

Clear solution

Endotoxin

Refer to Certificate of Analysis

Osmolality (as supplied)

Refer to Certificate of Analysis

pH (as supplied)

Refer to Certificate of Analysis

Sterility

No microbial growth detected

Warranty, Limitation of Remedies

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