



Catalog Number: 1111020

Minimum Essential Medium Eagle (Modified) (1X Solution) Auto-Pow® with Earle's Salts without Sodium Bicarbonate, L-Glutamine, and Phenol Red

Description: MEM, originally prepared by Harry Eagle, is one of the most popular cell culture media. Upon his attempts to cultivate normal mammalian fibroblasts and certain HeLa cell subtypes, it was revealed that the nutritional needs of these cell types could not be met by BME. Further studies led to the development of MEM incorporating specific modifications such as higher amino acid concentrations for the cultivation of fastidious cells. MP's MEM may be used to support the growth of cells in monolayers, in suspension and wide variety of other cell types with proper supplementation. MP offers MEM with either Earle's or Hanks' salts. Storage Temperature 2-8°C.

The formulation differs from the original in that the concentrations of some of the vitamins have been increased slightly; and in some, the amino acids differ by decimal amounts. In some formulation, the MgSO₄ concentration differs from that of Eagle but agrees with that quoted by Parker (Parker quotes 200.00 mg/liter MgSO₄·7H₂O).

Formulation:

<i>Component</i>	<i>mg/lt</i>	<i>Mol. Wt.</i>	<i>Mol. (mM)</i>
Amino Acids			
L-Arginine HCl	126.4000	174.2	0.73
L-Cystine 2Na	28.4200	284.3	0.10
L-Histidine HCl H ₂ O	41.9000	209.6	0.20
L-Isoleucine	52.5000	131.2	0.40
L-Leucine	52.5000	131.2	0.40
L-Lysine HCl	73.0600	182.6	0.40
L-Methionine	14.9000	149.2	0.10
L-Phenylalanine	33.0200	165.2	0.20
L-Threonine	47.6400	119.1	0.40
L-Tryptophan	10.2000	204.2	0.05
L-Tyrosine	36.2200	181.2	0.20
L-Valine	46.9000	117.1	0.40

Vitamins			
Choline Bitartrate	1.8000	253.3	0.0071
D-Calcium Pantothenate	1.0000	238.3	0.0042
Folic Acid	1.0000	441.4	0.0023
myo-Inositol	2.0000	180.2	0.0111
Nicotinamide	1.0000	122.13	0.0082
Pyridoxal HCl	1.0000	203.6	0.0049
Riboflavin	0.1000	376.4	0.0003
Thiamine HCl	1.0000	337.3	0.0030
Inorganic Salts			
Calcium Chloride [CaCl ₂ 2H ₂ O] Dihydrate	264.9000	147	1.80
Magnesium Sulfate [MgSO ₄]	97.7000	120.4	0.81
Potassium Chloride [KCl]	400.0000	74.55	5.37
Sodium Chloride [NaCl]	6800.0000	58.44	116.36
Sodium Phosphate Monobasic [NaH ₂ PO ₄ H ₂ O] Monohydrate	140.0000	159.96	0.88
Other			
Dextrose	1000.0000	180.2	5.55
Sodium Succinate 6H ₂ O	100.0000	270.1	0.37
Succinic Acid	75.0000	118.1	0.64
Add			
NaHCO ₃ Powder (g/L)		2.20	
NaHCO ₃ 7.5% Solution (mL/L)		29.40	
L-glutamine Powder (mg/L)		292.00	
L-glutamine 200 mM Solution (mL/L)		10.00	

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試薬事業部

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