



Product Information

Basal Medium Eagle (BME)

Eagle's Basal Medium (BME), developed by Harry Eagle, is one of the most widely used of all synthetic cell culture media. There are several "basal" media described by Eagle that vary slightly from one another. The Tissue Culture Association recommends use of the name "Eagle's Basal Medium" to describe only the formula developed to support HeLa cells. This basal medium formula was developed as a result of numerous studies carried out in the late 1950's to determine the essential nutritional requirements and other factors critical to the growth of cells in culture. Historically, BME has been used in studies conducted to measure the growth response of normal (WI-38) and transformed (mouse and HeLa) cells in monolayer culture. BME, when properly supplemented, has demonstrated wide applicability, for supporting monolayer growth of a wide variety of normal and transformed cell lines. BME is the predecessor of Eagle's Minimum Essential Medium (MEM) and Dulbecco's Modified Eagle's Medium (DME).

COMPONENT	B 9638 g/L	B 9763 g/L
INORGANIC SALTS		
Calcium Chloride•2H ₂ O	0.265	0.185
Magnesium Chloride•6H ₂ O	—	—
Magnesium Sulfate (anhydrous)	0.09767	0.09767
Potassium Chloride	0.4	0.4
Potassium Phosphate Monobasic (anhydrous)	—	0.06
Sodium Chloride	6.8	8.0
Sodium Phosphate Monobasic (anhydrous)	0.122	—
Sodium Phosphate Dibasic (anhydrous)	—	0.04788
Succinic Acid•2Na•6H ₂ O	—	—
Succinic Acid (free acid)	—	—
AMINO ACIDS		
L-Arginine•HCl	0.021	0.021
L-Cystine•2HCl	0.01565	0.01565
L-Glutamine	0.292	0.292
L-Histidine (free base)	0.008	0.008
L-Isoleucine	0.026	0.026
L-Leucine	0.026	0.026
L-Lysine•HCl	0.03647	0.03647
L-Methionine	0.0075	0.0075
L-Phenylalanine	0.0165	0.0165
L-Threonine	0.024	0.024
L-Tryptophan	0.004	0.004
L-Tyrosine (free base)	—	—
L-Tyrosine•2Na•2H ₂ O	0.02595	0.02595
L-Valine	0.0235	0.0235
VITAMINS		
D-Biotin	0.001	0.001
Choline Bitartrate	—	—
Choline Chloride	0.001	0.001
Folic Acid	0.001	0.001
myo-Inositol	0.002	0.002
Niacinamide	0.001	0.001
D-Pantothenic Acid (hemicalcium)	0.001	0.001
Pyridoxal•HCl	0.001	0.001
Riboflavin	0.0001	0.0001
Thiamine•HCl	0.001	0.001
OTHER		
D-Glucose	1.0	1.0
Phenol Red (sodium)	0.011	0.011
ADD		
L-Glutamine	—	—
Sodium Bicarbonate	2.2	0.35
Grams of powder required to prepare 1 L	9.2	10.3

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<u>COMPONENT</u>	B 1522 [1X] g/L	B 2900 [1X] g/L
INORGANIC SALTS		
Calcium Chloride•2H ₂ O	0.265	0.185
Magnesium Sulfate (anhydrous)	0.09767	0.09767
Potassium Chloride	0.4	0.4
Potassium Phosphate Monobasic (anhydrous)	—	0.06
Sodium Bicarbonate	2.2	0.35
Sodium Chloride	6.8	8.0
Sodium Phosphate Monobasic (anhydrous)	0.122	—
Sodium Phosphate Dibasic (anhydrous)	—	0.04788
AMINO ACIDS		
L-Arginine•HCl	0.021	0.021
L-Cystine•2HCl	0.01565	0.01565
L-Glutamine	—	—
L-Histidine (free base)	0.008	0.008
L-Isoleucine	0.026	0.026
L-Leucine	0.026	0.026
L-Lysine•HCl	0.03647	0.03647
L-Methionine	0.0075	0.0075
L-Phenylalanine	0.0165	0.0165
L-Threonine	0.024	0.024
L-Tryptophan	0.004	0.004
L-Tyrosine•2Na•2H ₂ O	0.02595	0.02595
L-Valine	0.0235	0.0235
VITAMINS		
D-Biotin	0.001	0.001
Choline Chloride	0.001	0.001
Folic Acid	0.001	0.001
myo-Inositol	0.002	0.002
Niacinamide	0.001	0.001
D-Pantothenic Acid (hemicalcium)	0.001	0.001
Pyridoxal•HCl	0.001	0.001
Riboflavin	0.0001	0.0001
Thiamine•HCl	0.001	0.001
OTHER		
D-Glucose	1.0	1.0
HEPES	—	—
Phenol Red•Na	0.011	0.011
ADD		
L-Glutamine	0.292	0.292
Sodium Bicarbonate	—	—
Grams of powder required to prepare 1 L	N/A	N/A

REFERENCES

1. Eagle, H. et al (1956). Myo-Inositol as an Essential Growth Factor for Normal and Malignant Human Cells in Tissue Culture. J.Biol. Chem. 214, 839.
2. Eagle, H. (1976). Media for Animal Cell Culture. Tissue Culture Association Manual. 3, 517-520.
3. Eagle, H. (1959). Amino Acid Metabolism in Mammalian Cell Cultures. Science. 130, 432-437.
4. Eagle, H. (1955). Nutrition Needs of Mammalian Cells in Culture. Science. 122, 501.