

Media Formulation

Eagle's Minimal Essential Medium (EMEM)



Version 2.0
Released Date: February 4, 2026

Cat. No. TM511

Store at 2-8°C, protect from light.
Shelf life: 18 months from date of manufacture.

Component	Molecular Weight (g/mol)	Concentration (mg/L)	Concentration (mM)
Amino Acids			
L-Alanine	89.0	8.9	0.100
L-Arginine HCl	211.0	126.0	0.597
L-Asparagine • H ₂ O	150.1	15.0	0.100
L-Aspartic Acid	132.1	13.3	0.101
L-Cysteine • 2HCl	313.0	31.3	0.100
L-Glutamic Acid	147.1	14.7	0.100
L-Glutamine	146.0	292.0	2.000
Glycine	75.0	7.5	0.100
L-Histidine • HCl • H ₂ O	209.6	42.0	0.200
L-Isoleucine	131.0	52.0	0.397
L-Leucine	131.0	52.0	0.397
L-Lysine • HCl	182.7	72.5	0.397
L-Methionine	149.0	15.0	0.101
L-Phenylalanine	165.0	32.0	0.194
L-Proline	115.1	11.5	0.100
L-Serine	105.0	10.5	0.100
L-Threonine	119.0	48.0	0.403
L-Tryptophan	204.0	10.0	0.049
L-Tyrosine • 2Na • 2H ₂ O	261.2	52.0	0.200
L-Valine	117.2	46.0	0.392
Vitamins			
Choline chloride	140.0	1.0	0.007
Folic Acid	441.0	1.0	0.002
i-Inositol	180.0	2.0	0.011
Niacinamide	122.0	1.0	0.008
D-Calcium pantothenate	477.0	1.0	0.002
Pyridoxine hydrochloride	206.0	1.0	0.005

Riboflavin	376.0	0.1	2.66×10 ⁻⁴
Thiamine hydrochloride	337.0	1.0	0.003
Inorganic Salts			
Calcium Chloride (2H ₂ O.)	147.0	200.0	1.36
Magnesium Sulfate (MgSO ₄)	120.0	97.7	0.814
Potassium Chloride (KCl)	75.0	400.0	5.333
Sodium Chloride (NaCl)	58.4	6800.0	116.44
Sodium Phosphate Monobasic (NaH ₂ PO ₄)	142.0	122.0	0.859
Sodium Bicarbonate (NaHCO ₃)	84.0	2200	26.19
Other Components			
D-Glucose (Dextrose)	180.0	1000.0	5.560
Phenol Red, Sodium	376.4	11.0	0.029

Special media modification is available as a Custom Media Service; please contact a technical representative at technical@abmgood.com for more details.