DMEM High Glucose Medium

high glucose (4.5 g/L), with L-Alanyl-L-Glutamine, with phenol red, with sodium bicarbonate, w/o HEPES, sterile-filtered, suitable for cell culture

Catalog number: LF-KR-ACE01103

Product Form: Clear solution at 1x

Product size: 500 mL

Sterility: Sterile-filtered

pH: 7.20~7.80

Endotoxin (LAL test): ≤ 5 EU/mL

Shipment: Ambient

Storage: Store at 2-8 °C for 12 months

Application: Dulbecco's Modified Eagle Medium (DMEM) is widely used in cell culture as a basal medium. It provides basic nutrients for growth of various mammalian cell lines, especially when supplemented with FBS. DMEM was shown to successfully cultivate primary cells, such as fibroblasts, neurons, HUVECs, smooth muscle cells, or even cells lines, such as HEK-293, HeLa, Cos-7, and PC-12.

Usage instruction: DMEM comes in various formulations, where the composition of components may differ. The original formulation of DMEM contains 1.0 g/L. DMEM High Glucose has an increased glucose content of 4.5 g/L. DMEM High Glucose contains no proteins, lipids, or growth factors. Therefore, DMEM High Glucose may require supplementation, commonly with 10% Fetal Bovine Serum (FBS). DMEM High Glucose uses a sodium bicarbonate buffer system and therefore requires a 5–10% CO2 environment to maintain physiological pH.

For scientific research use only, not for clinical diagnosis or treatment.

Formulation:

Components	Molecular Weight	Concentration (mg/L)	Concentration (mM)
Amino Acids			
Glycine	75	30	0.4
L-Arginine hydrochloride	211	84	0.39810428
L-Cystine 2HCl	313	63	0.20127796
L-Glutamine	146	584	4
L-Histidine hydrochloride-H2O	210	42	0.2
L-Isoleucine	131	105	0.8015267
L-Leucine	131	105	0.8015267
L-Lysine hydrochloride	183	146	0.7978142
L-Methionine	149	30	0.20134228
L-Phenylalanine	165	66	0.4
L-Serine	105	42	0.4
L-Threonine	119	95	0.79831934
L-Tryptophan	204	16	0.078431375
L-Tyrosine disodium salt dihydrate	261	104	0.39846742
L-Valine	117	94	0.8034188
Vitamins			
Choline chloride	140	4	0.028571429
D-Calcium pantothenate	477	4	0.008385744
Folic Acid	441	4	0.009070295
Niacinamide	122	4	0.032786883
Pyridoxine hydrochloride	206	4	0.019417476
Riboflavin	376	0.4	0.00106383
Thiamine hydrochloride	337	4	0.011869436
i-Inositol	180	7.2	0.04
Inorganic Salts			
Calcium Chloride (CaCl2) (anhyd.)	111	200	1.8018018
Ferric Nitrate (Fe(NO3)3"9H2O)	404	0.1	2.48E-04
Magnesium Sulfate (MgSO4) (anhyd.)	120	97.67	0.8139166
Potassium Chloride (KCl)	75	400	5.3333335
Sodium Bicarbonate (NaHCO3)	84	3700	44.04762
Sodium Chloride (NaCl)	58	6400	110.344826
Sodium Phosphate monobasic (NaH2PO4-H2O)	138	125	0.9057971
Other Components			
D-Glucose (Dextrose)	180	4500	25
Phenol Red	376.4	15	0.039851222
Sodium Pyruvate	110	110	1