

DMEM/F-12, HEPES Liquid Medium Formula

Components	Concentration (mg/L)
Amino Acids	
Glycine	18.75
L-Alanine	4.45
L-Arginine hydrochloride	147.5
L-Asparagine-H ₂ O	7.5
L-Aspartic acid	6.65
L-Cysteine hydrochloride-H ₂ O	17.56
L-Cystine 2HCl	31.29
L-Glutamic Acid	7.35
L-Glutamine	365
L-Histidine hydrochloride-H ₂ O	31.48
L-Isoleucine	54.47
L-Leucine	59.05
L-Lysine hydrochloride	91.25
L-Methionine	17.24
L-Phenylalanine	35.48
L-Proline	17.25
L-Serine	26.25
L-Threonine	53.45
L-Tryptophan	9.02
L-Tyrosine disodium salt dihydrate	55.79
L-Valine	52.85
Vitamins	
Biotin	0.0035
Choline chloride	8.98
D-Calcium pantothenate	2.24
Folic Acid	2.65
Niacinamide	2.02
Pyridoxine hydrochloride	2
Riboflavin	0.219
Thiamine hydrochloride	2.17
Vitamin B12	0.68
i-Inositol	12.6
Inorganic Salts	
Calcium Chloride (CaCl ₂) (anhyd.)	116.6
Cupric sulfate (CuSO ₄ 5H ₂ O)	0.0013
Ferric Nitrate (Fe(NO ₃) ₃ 9H ₂ O)	0.05

Ferrous Sulfate (FeSO ₄ 7H ₂ O)	0.417
Magnesium Chloride (anhydrous)	28.64
Magnesium Sulfate (MgSO ₄) (anhyd.)	48.84
Potassium Chloride (KCl)	311.8
Sodium Bicarbonate (NaHCO ₃)	1200
Sodium Chloride (NaCl)	6995.5
Sodium Phosphate dibasic (Na ₂ HPO ₄) anhydrous	71.02
Sodium Phosphate monobasic (NaH ₂ PO ₄ -H ₂ O)	62.5
Zinc sulfate (ZnSO ₄ 7H ₂ O)	0.432
Other Components	
D-Glucose (Dextrose)	3151
HEPES	3574.5
Hypoxanthine	2.05
Linoleic Acid	0.042
Lipoic Acid	0.105
Phenol Red	8.1
Putrescine 2HCl	0.081
Sodium Pyruvate	55
Thymidine	0.365