

## DMEM/F-12 Liquid Medium Formula

Components	Concentration (mg/L)
<b>Amino Acids</b>	
Glycine	18.75
L-Alanine	4.45
L-Arginine hydrochloride	147.5
L-Asparagine-H <sub>2</sub> O	7.5
L-Aspartic acid	6.65
L-Cysteine hydrochloride-H <sub>2</sub> O	17.56
L-Cystine 2HCl	31.29
L-Glutamic Acid	7.35
L-Glutamine	365
L-Histidine hydrochloride-H <sub>2</sub> 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
<b>Vitamins</b>	
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
<b>Inorganic Salts</b>	
Calcium Chloride (CaCl <sub>2</sub> ) (anhyd.)	116.6
Cupric sulfate (CuSO <sub>4</sub> 5H <sub>2</sub> O)	0.0013
Ferric Nitrate (Fe(NO <sub>3</sub> ) <sub>3</sub> 9H <sub>2</sub> O)	0.05

Ferrous Sulfate (FeSO <sub>4</sub> 7H <sub>2</sub> O)	0.417
Magnesium Chloride (anhydrous)	28.64
Magnesium Sulfate (MgSO <sub>4</sub> ) (anhyd.)	48.84
Potassium Chloride (KCl)	311.8
Sodium Bicarbonate (NaHCO <sub>3</sub> )	2438
Sodium Chloride (NaCl)	6995.5
Sodium Phosphate dibasic (Na <sub>2</sub> HPO <sub>4</sub> ) anhydrous	71.02
Sodium Phosphate monobasic (NaH <sub>2</sub> PO <sub>4</sub> H <sub>2</sub> O)	62.5
Zinc sulfate (ZnSO <sub>4</sub> 7H <sub>2</sub> O)	0.432
<b>Other Components</b>	
D-Glucose (Dextrose)	3151
Hypoxanthine	2.05
Linoleic Acid	0.042
Lipoic Acid	0.105
Phenol Red	8.1
Putrescine 2HCl	0.081
Sodium Pyruvate	55