

## Formulations

### DULBECCO'S MODIFIED EAGLE'S MEDIUM (DMEM) : HAM'S F-12 (1:1)

**Cat.# 112-037**

COMPONENTS	mg / L
<b>Inorganic Salts</b>	
CaCl <sub>2</sub> •2H <sub>2</sub> O	154.52
CuSO <sub>4</sub> •5H <sub>2</sub> O	0.0013
Fe(NO <sub>3</sub> ) <sub>3</sub> •9H <sub>2</sub> O	0.050
FeSO <sub>4</sub> •7H <sub>2</sub> O	0.417
KCl	311.83
MgCl <sub>2</sub> 6H <sub>2</sub> O	28.64
MgSO <sub>4</sub> (anhydrous)	48.83
NaCl	6999.50
NaHCO <sub>3</sub>	1200.00
NaH <sub>2</sub> PO <sub>4</sub> (anhydrous)	54.35
Na <sub>2</sub> HPO <sub>4</sub> (anhydrous)	71.06
ZnSO <sub>4</sub> •7H <sub>2</sub> O	0.4315
<b>Other Components</b>	
D-Glucose	3150.80
Hypoxanthine•Na	2.385
Linoleic acid	0.042
Lipoic acid	0.10315
Phenol red•Na	8.305
Putrescine•2HCl	0.08055
Sodium pyruvate	55.05
Thymidine	0.3633
<b>Amino Acids</b>	
L-Alanine	4.45
L-Arginine•HCl	147.35
L-Asparagine•H <sub>2</sub> O	7.505
L-Aspartic acid	6.655
L-Cysteine•2HCl	17.56
L-Cystine•2HCl	31.29
L-Glutamic acid	7.355

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COMPONENTS	mg / L
L-Glutamine	365.10*
Glycine	18.76
L-Histidine•HCl•H <sub>2</sub> O	31.48
L-Isoleucine	54.37
L-Leucine	58.96
L-Lysine•HCl	91.37
L-Methionine	17.24
L-Phenylalanine	35.48
L-Proline	17.27
L-Serine	26.26
L-Threonine	53.56
L-Tryptophan	9.02
L-Tyrosine•2Na•2H <sub>2</sub> O	55.81
L-Valine	52.66
<b>Vitamins</b>	
d-Biotin	0.00376
D-Ca pantothenate	2.12
Choline chloride	8.984
Folic acid	2.66
i-Inositol	12.5107
Nicotinamide	2.018
Pyridoxal•HCl	2.00
Pyridoxine•HCl	0.031
Riboflavin	0.22
Thiamine•HCl	2.17
Vitamin B <sub>12</sub>	0.679

\*Omitted from preparation. Add L-glutamine (Cat.# 118-084-060) to a final concentration of 2.5mM prior to use.

**Reference:** Barnes, D., and Sato, G. (1980) Anal. Biochem., **102**:255-270