



Catalog Number: 1642754

## Dulbecco's Modification of Eagle's Medium (DMEM) (1X Solution) without L-glutamine, phenol red

**Description:** Also known as DME, Dulbecco's Modified Eagle's Medium is the most widely used modification of Eagle's Basal Medium (BME). DMEM contains four times greater concentration of amino acids, vitamins and supplementary components. The original formulation calls for 1000 mg/L of glucose, which was first employed to support the polyoma virus in primary and secondary embryonic mouse cultures. For optimal culturing of other cell types, a modification of 4500 mg/L glucose is available from MP. Storage Temperature 2-8°C.

### References:

1. Dulbecco, R. and Freeman, G., Virology, v. 8, 396 (1959).
2. Smith, J.D., et. al., Virology, v. 12, 185 (1960).
3. Morton, H.J., In Vitro, v. 6, 89 (1970).

### Formulation:

<i>Component</i>	<i>mg/l</i>	<i>Mol. Wt.</i>	<i>Mol. (mM)</i>
<b>Amino Acids</b>			
L-Arginine HCl	84.00	210.7	0.40
L-Cystine	48.00	240.3	0.20
Glycine	30.00	75.07	0.40
L-Histidine HCl H <sub>2</sub> O	42.00	209.6	0.20
L-Isoleucine	104.80	131.2	0.80
L-Leucine	104.80	131.2	0.80
L-Lysine HCl	146.20	182.6	0.80
L-Methionine	30.00	149.2	0.20
L-Phenylalanine	66.00	165.2	0.40
L-Serine	42.00	105.1	0.40
L-Threonine	95.20	119.1	0.80
L-Tryptophan	16.00	204.2	0.08

L-Tyrosine	72.00	181.2	0.40
L-Valine	93.60	117.1	0.80
<b>Vitamins</b>			
Choline Chloride	4.00	139.6	0.03
D-Calcium Pantothenate	4.00	238.3	0.02
Folic Acid	4.00	441.4	0.01
myo-Inositol	7.00	180.2	0.04
Nicotinamide	4.00	122.13	0.03
Pyridoxal HCl	4.00	203.6	0.02
Riboflavin	0.40	376.4	0.0011
Thiamine HCl	4.00	337.3	0.01
<b>Inorganic Salts</b>			
Calcium Chloride [CaCl <sub>2</sub> 2H <sub>2</sub> O] Dihydrate	264.90	147	1.80
Ferric Nitrate [Fe(NO <sub>3</sub> ) <sub>3</sub> 9H <sub>2</sub> O] Nonahydrate	0.10	404	0.0002
Magnesium Sulfate [MgSO <sub>4</sub> ]	97.70	120.4	0.81
Potassium Chloride [KCl]	400.00	74.55	5.37
Sodium Bicarbonate [NaHCO <sub>3</sub> ]	3700.00	84.01	44.04
Sodium Chloride [NaCl]	6400.00	58.44	109.51
Sodium Phosphate Monobasic [NaH <sub>2</sub> PO <sub>4</sub> H <sub>2</sub> O] Monohydrate	125.00	137.99	0.905
<b>Other</b>			
Dextrose	4500.00	180.2	24.97
Sodium Pyruvate	110.00	110	1.00
<b>Add</b>			
L-glutamine Powder (mg/L)		584.0000	
L-glutamine 200 mM Solution (mL/L)		20.0000	

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