

Catalog Number: 1060120

RPMI 1640 Medium, powder, with L-glutamine, without sodium bicarbonate

Description: This medium was originally developed by Moore and his colleagues at Roswell Park Memorial Institute (RPMI). It was based on the RPMI 1630 line of media which utilized a bicarbonate buffering system and alterations in the amounts of amino acids and vitamins. RPMI has successfully been used for the cultivation of normal human and neoplastic leukocytes. It is now a popular general purpose medium when properly supplemented. A Dutch Modification of RPMI 1640 is also available through MP. The Dutch Modification contains 6400 mg/l sodium chloride instead of 6000 mg/l; contains 1000 mg/l sodium bicarbonate instead of 2000 mg/l; and contains 20 mM HEPES.

Formulation:

<i>Components</i>	<i>mg/L</i>	<i>Mol. Wt.</i>	<i>Mol. (mM)</i>
Amino Acids			
L-Arginine HCl	200.000	210.7	1.15
L-Asparagine H ₂ O	56.820	150.1	0.38
L-Aspartic Acid	20.000	133.1	0.15
L-Cystine 2HCl	65.200	313.2	0.21
L-Glutamic Acid	20.000	147.1	0.14
L-Glutamine	300.000	146.1	2.05
Glycine	10.000	75.07	0.13
L-Histidine	15.000	155.2	0.10
L-Hydroxyproline	20.000	131.1	0.15
L-Isoleucine	50.000	131.2	0.38
L-Leucine	50.000	131.2	0.38
L-Lysine HCl	40.000	182.6	0.22
L-Methionine	15.000	149.2	0.10
L-Phenylalanine	15.000	165.2	0.09

L-Proline	20.000	115.1	0.17
L-Serine	30.000	105.1	0.29
L-Threonine	20.000	119.1	0.17
L-Tryptophan	5.000	204.2	0.02
L-Tyrosine 2Na 2H ₂ O	28.830	261.2	0.11
L-Valine	20.000	117.1	0.17
Vitamins			
Biotin	0.200	244.3	0.0008
Choline Chloride	3.000	139.6	0.0215
D-Calcium Pantothenate	0.250	238.3	0.0010
Folic Acid	1.000	441.4	0.0023
myo-Inositol	35.000	180.2	0.1942
Nicotinamide	1.000	122.13	0.0082
para-Aminobenzoic Acid	1.000	137.1	0.0073
Pyridoxine HCl	1.000	205.6	0.0049
Riboflavin	0.200	376.4	0.0005
Thiamine HCl	1.000	337.3	0.0030
Vitamin B12	0.005	1355.4	0.000004
Inorganic Salts			
Calcium Nitrate [Ca(NO ₃) ₂ 4H ₂ O] Tetrahydrate	100.000	236.2	0.42
Magnesium Sulfate [MgSO ₄]	48.800	120.4	0.41
Potassium Chloride [KCl]	400.000	74.55	5.37
Sodium Bicarbonate [NaHCO ₃]	0.000	84.01	0.00
Sodium Chloride [NaCl]	6000.000	58.44	102.67
Sodium Phosphate Dibasic [Na ₂ HPO ₄]	800.700	141.96	5.64
Other			
Dextrose	2000.000	180.2	11.10
Glutathione (reduced)	1.000	307.33	0.0033
Phenol Red Sodium Salt	5.000	376.4	0.01

Add	
NaHCO ₃ Powder (g/L)	2.00
NaHCO ₃ 7.5% Solution (mL/L)	26.72

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