

Product Information

RPMI 1640 Powder Medium
with L-Glutamine, w/o Sodium Bicarbonate

Cat. No.: RPMI-A-P10 (10 l), RPMI-A-P50 (50 l)

Product Specifications

Appearance	Off-white to creamy white, homogenous powder
Solubility	Clear solution at 10.4 g/l
pH w/o Sodium Bicarbonate	7.20 – 7.80
pH with Sodium Bicarbonate	7.60 – 8.20
Osmolality w/o Sodium Bicarbonate	230 – 270 mOsm/kg
Osmolality with Sodium Bicarbonate	280 – 320 mOsm/kg
Endotoxin	< 5 EU/ml
Cell Culture	Tested
Storage	+2°C to +8°C, dry and protected from light
Use at	10.4 g/l
Add	2.0 g/l Sodium Bicarbonate
CO ₂ concentration optimum for liquid medium	4.5 %

Instructions for Use: Preparation of 1 liter liquid medium

1. Suspend 10.4 g in 900 ml tissue culture grade water with constant, gentle stirring until the powder is completely dissolved. Do not heat the water.
2. It may be necessary to lower the pH to 4.0 with 1 N HCl to completely dissolve this product. After it has dissolved completely, the pH can be raised to 7.2 with 1 N NaOH prior to the addition of sodium bicarbonate.
3. Add 2.0 g of sodium bicarbonate powder or 26.7 ml of 7.5 % sodium bicarbonate solution for 1 liter of medium and stir until dissolved.
4. Adjust the pH to 0.2 to 0.3 pH units below the desired pH using 1 N HCl or 1 N NaOH since the pH tends to rise during filtration.
5. Make up the final volume to 1000ml with tissue culture grade water.
6. Sterilize the medium immediately by filtering through a sterile membrane filter with porosity of 0.22 micron or less, using positive pressure rather than vacuum to minimize the loss of carbon dioxide.
7. Aseptically add sterile supplements as required and dispense the desired amount of sterile medium into sterile containers.
8. Store liquid medium at +2°C to +8°C and in dark until use.

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Formulation

Components	mg/l	Vitamins	
Amino Acids		p-Amino Benzoic Acid	1.00
L-Arginine HCl	241.00	D-Biotin	0.20
L-Asparagine	50.00	Choline Chloride	3.00
L-Aspartic Acid	20.00	D-Calcium Pantothenate	0.25
L-Cystine x 2 HCl	65.20	Folic Acid	1.00
L-Glutamine	300.00	myo-Inositol	35.00
Glycine	10.00	Nicotinamide	1.00
L-Glutamic Acid	20.00	Pyridoxine x HCl	1.00
L-Histidine x HCl x H ₂ O	20.96	Riboflavin	0.20
L-Hydroxy-L-Proline	20.00	Thiamine x HCl	1.00
L-Isoleucine	50.00	Vitamin B12	0.005
L-Leucine	50.00	Inorganic Salts	
L-Lysine x HCl	40.00	Calcium Nitrate x 4 H ₂ O	100.00
L-Methionine	15.00	Magnesium Sulfate	48.84
L-Phenylalanine	15.00	Potassium Chloride	400.00
L-Proline	20.00	Sodium Chloride	6000.00
L-Serine	30.00	Sodium Phosphate Dibasic Anhydrous	800.00
L-Threonine	20.00	Other Components	
L-Tryptophan	5.00	D-Glucose	2000.00
L-Tyrosine x 2 Na 2 H ₂ O	28.83	L-Glutathione Reduced	1.00
L-Valine	20.00	Phenol Red Sodium Salt	5.30

Additional Information

- Preparation of concentrated medium is not recommended since free base amino acids and salt complexes having low solubility may precipitate in concentrated medium.
- pH and sodium bicarbonate concentration of the prepared medium are critical factors affecting cell growth. This is also influenced by amount of medium and volume of culture vessel used (surface to volume ratio). For example, in large bottles pH tends to rise perceptibly as significant volume of carbon dioxide is released. Therefore, optimal conditions of pH, sodium bicarbonate concentration, surface to volume ratio must be determined for each cell type. We recommend stringent monitoring of pH. If needed, pH can be adjusted by using sterile 1 N HCl or 1 N NaOH or by bubbling in carbon dioxide.
- If required, supplements can be added to the medium prior to or after filter sterilization observing sterility precautions. Shelf life of the medium will depend on the nature of supplement added to the medium.

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Precautions and Disclaimer

This product is for research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Help needed?

If you have any further questions regarding this product please do not hesitate to contact our cell culture experts:

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