

DATA SHEET

Rev.ver: 01

1. Identification

Product name	RPMI-1640 With L-Glutamine Without Sodium Bicarbonate, Phenol Red and Biotin
CAT.no	CCMP112

2. Description

The Roswell Park Memorial Institute (RPMI) series, developed by Moore and colleagues, comprises media formulated for the in vitro culture of normal and cancerous human cells. Among these, RPMI 1640 is the most widely utilized medium. Adapted from McCoy's 5A medium, RPMI 1640 was initially designed to promote the growth of human lymphoblastoid cells in suspension culture. Today, it is commonly used for a variety of anchorage-dependent cell lines as well. Typically, RPMI 1640 requires supplementation with 5–20% fetal bovine serum, though it is also capable of supporting cell growth without serum. RPMI 1640 with L-glutamine. For optimal cell culture results, users should consult relevant literature to determine specific supplementation and growth requirements for individual cell lines.

3. Product Specifications

Appearance	White to yellow powder
CO2 concentration, optimum	5.0 %
Storage and shelf life	Store at +2°C to +8°C protected from light.
Shipping conditions	Ambient

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4. Formulation

Components	Concentration mg/L
Amino Acids:	
L-Arginine	200.00
L-Asparagine H ₂ O	50.00
L-Aspartic Acid	20.00
L-Cystine 2 HCl	65.00
L- Glutamine	300.00
Glycine	10.00
L-Glutamic Acid	20.00
L-Histidine HCl H ₂ O	20.96
L-Hydroxy-L-Proline	20.00
L-Isoleucine	50.00
L-Leucine	50.00
L-Lysine HCl	40.00
L-Methionine	15.00
L-Phenylalanine	15.00
L-Proline	20.00
L-Serine	30.00
L-Threonine	20.00
L-Tryptophan	5.00
L-Tyrosine 2 Na 2 H ₂ O	29.00
L-Valine	20.00
Vitamins:	
p-Amino Benzoic Acid	1.00
D-Biotin	00
Choline Chloride	3.00

D-Calcium Pantothenate	0.25
Folic Acid	1.00
i-Inositol	35.00
Nicotinamide	1.00
Pyridoxine HCl	1.00
Riboflavin	0.20
Thiamine HCl	1.00
Vitamin B12	0.005
Inorganic Salts:	
Ca (NO ₃) ₂ 4 H ₂ O	100.00
MgSO ₄ 7 H ₂ O	48.84
KCl	400.00
NaCl	6000.00
Na ₂ HPO ₄	800.00
Other Components:	
D-Glucose	2000.00
L-Glutathione Reduced	1.00
Phenol Red Sodium Salt	0

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Preparation of 1-liter liquid medium:

1. Suspend 10.4 g in 900 ml cell culture grade water with constant, gentle stirring until the powder is completely dissolved. Do not heat the water.
2. Add 2.0 g of sodium bicarbonate powder for 1 liter of medium and stir until dissolved.
3. 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.
4. Add cell culture grade water up to the final volume of 1000 ml
5. 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.
6. Aseptically add sterile supplements as required and dispense the desired amount of sterile medium into sterile containers.
7. Store liquid medium at +2°C to +8°C and in dark until use.

5. 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.