

DATA SHEET

Rev.ver: 01

1. Identification

Product name **RPMI-1640** (ATCC modification) with L-Glutamine, HEPES, Phenol Red, Sodium Pyruvate, High Glucose and Low sodium bicarbonate

Catalog.no **CCML119**

2. Description

RPMI 1640 Medium was originally developed at Roswell Park Memorial Institute for the culture of human leukemic cells in both suspension and monolayer formats. It is now widely used for various mammalian cell lines, including HeLa, Jurkat, MCF-7, PC12, PBMCs, astrocytes, and carcinoma cells. This medium is distinguished by its inclusion of the reducing agent glutathione and elevated levels of vitamins, including biotin, vitamin B12, PABA, inositol, and choline. The ATCC-modified formulation contains high glucose, low sodium bicarbonate, sodium pyruvate, HEPES, and low L-glutamine. RPMI 1640 Medium is protein- and growth factor-free and typically requires supplementation with 10% Fetal Bovine Serum. It utilizes a sodium bicarbonate buffer system and is designed for use in a 5–7% CO₂ atmosphere.

3. Product Specifications

Appearance	Orangish red colored, clear solution
CO ₂ 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	15.00
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 2Na 2H ₂ O	29.00
L-Valine	20.00
Vitamins:	
p-Amino Benzoic Acid	1.00
D-Biotin	0.20
Choline Chloride	3.00
D-Calcium Pantothenate	0.25

Components	Concentration mg/L
Folic Acid	1.00
i-Inositol	35.00
Niacinamide	1.00
Pyridoxine HCl	1.00
Riboflavin	0.20
Thiamine HCl	1.00
Vitamin B12	0.005
Inorganic Salts:	
Calcium nitrate (Ca (NO ₃) ₂ 4H ₂ O)	100.00
Magnesium Sulfate (MgSO ₄) (anhyd.)	48.84
Potassium Chloride (KCl)	400.00
Sodium Chloride (NaCl)	6000.00
Sodium Phosphate dibasic (Na ₂ HPO ₄)	800.00
Sodium Bicarbonate (NaHCO ₃)	1500.0
Other Components:	
D-Glucose	4500.00
L-Glutathione Reduced	1.00
Phenol Red Sodium Salt	5.00
HEPES	2383.0
Sodium Pyruvate	110.0

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.