

Product information

Roswell Park Memorial Institute (RPMI) media are a series of media developed by Moore et al for the culture of human normal and neoplastic cells in vitro. RPMI-1640 is the most commonly used medium in the series. RPMI 1640 Medium is unique from other media because it contains the reducing agent glutathione and high concentrations of vitamins. RPMI 1640 Medium contains biotin, vitamin B12, and PABA, which are not found in Eagle's Minimal Essential Medium or Dulbecco's Modified Eagle Medium. In addition, the vitamins inositol and choline are present in very high concentrations. This RPMI formulation has been modified by ATCC to contain high glucose, low sodium bicarbonate, sodium pyruvate, HEPES, and low L-glutamine. RPMI 1640 Medium contains no proteins, lipids, or growth factors. Therefore, RPMI 1640 Medium requires supplementation, commonly with 10% [Fetal Bovine Serum \(FBS\)](#). [RPMI 1640 Medium uses a sodium bicarbonate buffer system \(1.5 g/L\)](#)

RBRPMI11 is a RPMI 1640 variant supplemented with glucose, glutamine, sodium bicarbonate, HEPES, Sodium pyruvate and phenol red

Storage temperature	2-8°C, protect from light
Shelf life	12 months from manufacturing

Applications

RPMI 1640 Medium was originally developed to culture human leukemic cells in suspension and as a monolayer. Roswell Park Memorial Institute (RPMI) 1640 Medium has since been found suitable for a variety of mammalian cells, including HeLa, Jurkat, MCF-7, PC12, PBMC, astrocytes, and carcinomas.

Quality Control

Appearance	Orangish red, clear liquid
pH	7.0 -7.6
Osmolality	270 -310 mOsm/kg
Sterility ¹	Sterile
Endotoxin ²	< 1.0 EU/ml
Cell culture test ³	Meets the requirements

Note:

¹ Sterility Testing (Bacterial and Fungal) carried out in accordance with < USP 71 >

²Bacterial Endotoxin Testing carried out in accordance with < USP 85 >

³Indicave cell line was seeded in complete control medium and complete test medium in a 96-well plate in triplicates and incubated at 37°C in a 5% CO₂ environment. Growth rates and viability of the cells in test medium must be comparable to the cultures grown in control medium.

Composition

Components	Concentration (mg/L)
Amino Acids	
Glycine	10
L-Asparagine	50
L-Aspartic acid	20
L-Cystine Dihydrochloride	65
L-Glutamic Acid	20
L-Glutamine	300
L-Histidine	15
L-Hydroxyproline	20
L-Isoleucine	50
L-Leucine	50
L-Lysine hydrochloride	40
L-Methionine	15
L-Phenylalanine	15
L-Proline	20
L-Serine	30
L-Threonine	20
L-Tryptophan	5
L-Tyrosine disodium salt dihydrate	29
L-Valine	20
Vitamins	
Folic Acid	1
Biotin	0.2
Choline chloride	3
D-Calcium pantothenate	0.25
i-Inositol	35
Niacinamide	1
Para-Aminobenzoic Acid	1
Pyridoxine hydrochloride	1
Riboflavin	0.2
Thiamine hydrochloride	1
Vitamin B12	0.005

Components	Concentration (mg/L)
Inorganic Salts	
Calcium nitrate-Tetrahydrate	100
Magnesium Sulfate (anhyd.)	48.84
Potassium Chloride	400
Sodium Bicarbonate	1500
Sodium Chloride	6000
Sodium Phosphate dibasic (anhyd.)	800
Other Components	
Glutathione (reduced)	1
D-Glucose (Dextrose)	4500
Phenol red sodium salt	5
HEPES	2383