

Product Name

Name: RPMI 1640 Medium, without L-Glutamine

Cat. No.: C3017-0500

Size: 500 mL

Product Description

RPMI 1640 Medium without L-Glutamine has been specifically developed for the long-term culture of blood cells, the culture of normal and abnormal human leukocytes (e.g., neoplastic WBC's) and is now used as a general medium (with serum) for hybridoma cultures. Roswell Park Memorial Institute (RPMI) 1640, when properly supplemented, has demonstrated wide applicability for supporting the growth of many types of cells in culture, including human lymphocytes.

Most common types of media consist of an isotonic, buffered basal nutrient-enriched environment which provides an energy source, inorganic salts, vitamins, amino acids as well as additional constituents (e.g., supplements) according to the demands of a particular cell line. This relatively more complex medium formulation provides the optimal cell culture environment which mimics those of the *in vivo* environment including basic nutritional requirements, osmotic pressure, physiological pH, and temperature among other considerations. At a minimum, it consists of the foundation medium components that are all part and parcel of a pre-tested complete media to assist the cells in meeting their metabolic demands.

RPMI 1640 medium contains no growth-promoting factors or antimicrobials.

L-Glutamine, a precursor of glutamate, is one of the most readily available sources of energy for many rapidly dividing cell types for use *in vitro* and is a key component and essential amino acid that is required in many cell culture media formulations and in virtually all mammalian cells in culture. Sodium pyruvate serves as an additional and easily accessible carbohydrate energy source for cells in culture. Along with D-glucose, these balanced energy sources serve as carbon skeletons for cell anabolic processes in addition to nucleic acid metabolism and protein production while limiting the potential accumulation of the toxic ammonia gas.

Composition

Ingredients	mg/L	Ingredients	mg/L
INORGANIC SALTS			
Calcium nitrate tetrahydrate	100.000	Sodium chloride	6000.000
Magnesium sulphate anhydrous	48.840	Sodium phosphate dibasic anhydrous	800.000
Potassium chloride	400.000		
AMINO ACIDS			
Glycine	10.000	L-Leucine	50.000
L-Arginine hydrochloride	241.000	L-Lysine hydrochloride	40.000
L-Asparagine	50.000	L-Methionine	15.000
L-Aspartic acid	20.000	L-Phenylalanine	15.000
L-Cystine dihydrochloride	65.200	L-Proline	20.000
L-Glutamic acid	20.000	L-Serine	30.000
L-Histidine hydrochloride	20.960	L-Threonine	20.000

monohydrate

L-Tryptophan	5.000	L-Tyrosine disodium salt	28.830
L-Hydroxyproline	20.000	L-Valine	20.000
L-Isoleucine	50.000		

Vitamins

Choline chloride	3.000	Riboflavin	0.200
D-Biotin	0.200	Thiamine hydrochloride	1.000
D-Ca-Pantothenate	0.250	Vitamin B12	0.005
Folic acid	1.000	i-Inositol	35.000
Niacinamide	1.000	p-Amino benzoic acid (PABA)	1.000
Pyridoxine hydrochloride	1.000		

OTHERS

D-Glucose	2000.000	Phenol red sodium salt	5.300
Glutathione reduced	1.000	Sodium bicarbonate	2000.000

Storage and Stability

The product should be kept at **2 - 8°C**.

The product is **light-sensitive** and therefore should not be left in the light.

Shelf life: 12 months from date of manufacture.

Procedure

1. Take a bottle from the refrigerator at 2-8°C and read the label.
2. Wipe the outside of the bottle with a disinfectant solution such as 70% ethanol.
3. Pipette appropriate volume using aseptic/sterile technique under a laminar-flow culture hood.
4. Add 2 mM of L-Glutamine 200 mM Solution. L-Glutamine, a precursor of glutamate, is one of the most readily available sources of energy for many rapidly dividing cell-types for use in vitro and is a key component and essential amino acid that is required in many cell culture media formulations and in virtually all mammalian cells in culture.
5. Add antibiotics or other nutrients if desired.

Quality control

RPMI 1640 Medium, without L-Glutamine is tested for sterility, pH, osmolality, and endotoxin concentration. In addition, each batch is tested for cell growth performance.

Precaution and Disclaimer

For research use only, not for clinical diagnosis, and treatment.