Product Name

Name: RPMI 1640 Medium, without D-Glucose, without L-Glutamine

Cat. No.: C3015-0500

Size: 500 mL

Product Description

Roswell Park Memorial Institute (RPMI) 1640 Medium, without D-Glucose, without L-Glutamine, when properly supplemented, 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 (in the presence of serum) for culturing hybridoma. It is now widely used for supporting the growth of many types of cells in culture, including human lymphocytes. RPMI 1640 Medium without D-Glucose, without L-Glutamine contains no growth promoting factors or antimicrobials. Thus, fetal bovine serum (FBS) is supplemented for enhancing cell proliferation and survival.

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 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.

L-Glutamine, a precursor of glutamate, is one of the most readily available sources of energy and carbon sources 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. In addition, sodium pyruvate serves as another easily accessible carbohydrate or energy source for cells in culture. Along with D-glucose, these balanced energy sources serve as the carbon skeletons for cell anabolic processes in addition to nucleic acid metabolism and protein production while limiting the potential cumulative effects of toxic ammonia.

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-Serine	30.000
L-Glutamic acid	20.000	L-Threonine	20.000
L-Histidine hydrochloride monohydrate	20.960	L-Tryptophan	5.000
L-Hydroxyproline	20.000	L-Tyrosine disodium salt	28.830
L-Isoleucine	50.000	L-Valine	20.000
L-Proline	20.000		
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			
Sodium bicarbonate	2000.000	Phenol red sodium salt	5.300
Glutathione reduced	1.000		

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. Warm up to room temperature (15 - 30°C) prior to use.
2. Ensure that the bottle cap is tight and swirl the bottle until reaching homogeneity.
3. Wipe the outside of the bottle with a disinfectant solution such as 70% ethanol.
4. Pipette appropriate volume using aseptic/sterile technique under a laminar-flow culture hood.
5. Add antibiotics or other nutrients if desired.

Quality control

RPMI 1640 Medium, without D-Glucose, 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.