

Technical Information

RPMI-1640

With L-Glutamine, 2gms per liter Glucose, 0.165 moles per liter MOPS buffer Without Sodium bicarbonate 1X Liquid cell Culture Medium

Product Code: AL1200A

Application:-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. A modification of McCoy's 5A medium, the medium was specifically designed to support the growth of human lymphoblastoid cells in suspension culture. Presently the medium is extensively used for a wide range of anchorage dependant cell lines. The medium needs to be supplemented with 5-20% fetal bovine serum. The medium is also known to support growth of cells in the absence of serum.

AL1200A is RPMI 1640 with L-glutamine, 2gms per Litre glucose and 0.165M per Litre MOPS buffer. It does not contain sodium bicarbonate. *MOPS, a zwitterionic buffer does not antagonize antifungal agents at final concentration of 0.165mol/L for pH 7.0. Therefore, this medium is used as a diluent for antifungal agents that are water-soluble as well as water-insoluble. For waterinsoluble antifungal agents, that cannot be prepared as stock solutions in water, such as amphotericin B, anidulafungin, itraconazole, ketoconazole, posaconazole and voriconazole, a dilution series of the agent should be prepared first at 100 times final strength in an appropriate solvent. Each of these non-aqueous solutions should then be diluted tenfold in RPMI-1640 broth". Users are advised to review the literature for recommendations regarding medium supplementation and physiological growth requirements specific for different cell lines.

Composition**

Ingredients	mg/Litre
INORGANIC SALTS	
Calcium nitrate tetrahydrate	100.000
Magnesium sulphate anhydrous	48.840
Potassium chloride	400.000
Sodium chloride	6000.000
Sodium phosphate dibasic anhydrous	800.000
AMINO ACIDS	
Glycine	10.000
L-Arginine hydrochloride	241.000
L-Asparagine	50.000
L-Aspartic acid	20.000
L-Cystinedihydrochloride	65.200
L-Glutamic acid	20.000
L-Glutamine	300.000
L-Histidine hydrochloride monohydrate	20.960
L-Hydroxyproline	20.000
L-Isoleucine	50.000
L-Leucine	50.000
L-Lysine hydrochloride	40.000
L-Methionine	15.000
L-Phenylalanine	15.000
L-Proline	20.000
L-Serine	30.000
L-Threonine	20.000
L-Tryptophan	5.000
L-Tyrosine disodium salt	28.830
L-Valine	20.000

VITAMINS

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

OTHERS

D-Glucose	2000.000
Glutathione reduced	1.000
MOPS buffer, free acid	34500.000
Phenol red sodium salt	5.300

Methodology

1. Add 26.67ml of 7.5% sodium bicarbonate solution (TCL1013) for 1 litre of medium.

Material required but not provided

Sodium bicarbonate solution 7.5% (TCL1013)

Quality control

Appearance

Yellow colored, clear solution.

pH

5.30 -5.90

Osmolality in mOsm/Kg H₂O

390.00 -430.00

Sterility

No bacterial or fungal growth is observed after 14 days of incubation, as per USP specification.

Cultural Response

The growth promotion capacity of the medium is assessed qualitatively by analyzing the cells for the morphology and quantitatively by estimating the cell counts and comparing it with a control medium through minimum three subcultures.

Endotoxin Content

NMT 5EU/ml

Storage and Shelf Life

Store at 2-8°C away from bright light. Shelf life is 12 months. Use before expiry date given on the product label.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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