

Technical Information

RPMI-1640

With Sodium bicarbonate and 20mM HEPES buffer Without L-Glutamine 1X Liquid cell Culture Medium

Product Code: AL1198

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.

AL1198 is RPMI-1640 medium supplemented with 20mM HEPES buffer and sodium bicarbonate. It does not contain L-glutamine. HEPES, a zwitterionic buffer having a pKa of 7.3 at 37°C prevents the initial rise in pH that tends to occur at the initiation of a culture and increases the buffering capacity of the medium. 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
Disodium hydrogen phosphate anhydrous	800.000
Magnesium sulphate anhydrous	48.840
Potassium chloride	400.000
Sodium bicarbonate	2000.000
Sodium chloride	6000.000
AMINO ACIDS	
Glycine	10.000
L-Arginine hydrochloride	241.870
L-Asparagine anhydrous	50.000
L-Aspartic acid	20.000
L-Cystinedihydrochloride	65.200
L-Glutamic acid	20.000
L-Histidine hydrochloride	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
D-Inositol	35.000
P-Amino benzoic acid (PABA)	1.000

OTHERS

D-Glucose	2000.000
Glutathione reduced	1.000
HEPES Buffer	4766.000
Phenol red sodium salt	5.300

Methodology

1. Add 10.3 ml of 200mM L-glutamine (TCL1012) for 1 litre of medium.

Material required but not provided

L-Glutamine solution 200mM (TCL1012)

Quality control

Appearance

Orangish red colored, clear solution.

pH

7.00 -7.60

Osmolality in mOsm/Kg H₂O

255.00 -295.00

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 18 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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