Fischer's Medium

With L-Glutamine
Without Sodium bicarbonate

Product Code: AT054

Product Description :

Fischer's medium was originally formulated to support serial propagation of cells from leukemic mice. Fischer's medium supports clonal reproduction of cells, particularly lymphoblast from primary explants or from cells in culture.

AT054 is Fischer's Medium with L-glutamine. Users are advised to review the literature for recommendations regarding medium supplementation and physiological growth requirements specific for different cell lines.

Composition :

Ingredients	mg/L
INORGANIC SALTS	
Calcium chloride dihydrate	91.000
Magnesium chloride anhydrous	46.830
Potassium chloride	400.000
Sodium chloride	8000.000
Sodium dihydrogen phosphate anhydrous	60.000
Sodium phosphate dibasic anhydrous	60.000
AMINO ACIDS	
L-Arginine hydrochloride	15.000
L-Asparagine anhydrous	10.000
L-Cystine dihydrochloride	26.100
L-Glutamine	204.000
L-Histidine hydrochloride	74.040
L-Isoleucine	75.000
L-Leucine	30.000
L-Lysine hydrochloride	50.000
L-Methionine	100.000
L-Phenylalanine	60.000
L-Serine	15.000
L-Threonine	40.000
L-Tryptophan	10.000
L-Tyrosine disodium salt	75.230
L-Valine	70.000
VITAMINS	
Choline chloride	1.500
D-Biotin	0.010
D-Ca-Pantothenate	0.500
Folic acid	10.000
Niacinamide	0.500
Pyridoxal hydrochloride	0.500
Riboflavin	0.500
Thiamine hydrochloride	1.000
myo-Inositol	1.500
OTHERS	
D-Glucose	1000.000
Phenol red sodium salt	5.300

Directions :

1. Suspend 10.5gms in 900ml tissue culture grade water with constant, gentle stirring until the powder is completely dissolved. Do not heat the water.
2. Add 1.125gms of sodium bicarbonate powder (TC230) or 15.0 ml of 7.5% sodium bicarbonate solution (TCL013) for 1 litre of medium and stir until dissolved.
3. Adjust the pH to 0.2 - 0.3 pH units below the desired pH using 1N HCl or 1N NaOH since the pH tends to rise during filtration.
4. Make up the final volume to 1000ml with tissue culture grade water.
5. Sterilize the medium immediately by filtering through a sterile membrane filter with a porosity of 0.22 micron or less, using positive pressure rather than vacuum to minimize the loss of carbon dioxide.
6. Aseptically add sterile supplements as required and dispense the desired amount of sterile medium into sterile containers.
7. Store liquid medium at 2-8°C and in dark till use.

Material required but not provided :

Tissue culture grade water (TCL010)
Sodium bicarbonate (TC230)
Sodium bicarbonate solution, 7.5% (TCL013)
1N Hydrochloric acid (TCL003)
1N Sodium hydroxide (TCL002)
Foetal bovine serum (RM1112/RM10432)

Please refer disclaimer overleaf

Quality Control:

Appearance
Off-white to Creamish white, homogenous powder.

Solubility
Clear solution at 10.5gms/L.

pH without Sodium Bicarbonate
6.50 -7.10

pH with Sodium Bicarbonate
7.40 -8.00

Osmolality without Sodium Bicarbonate
280.00 -320.00

Osmolality with Sodium Bicarbonate
300.00 -340.00

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:

1. All the powdered media and prepared liquid culture media should be stored at 2-8°C. Use before the expiry date. Inspite of above recommended storage condition, certain powdered medium may show some signs of deterioration /degradation in certain instances. This can be indicated by change in colour, change in appearance and presence of particulate matter and haziness after dissolution.
2. Preparation of concentrated medium is not recommended since free base amino acids and salt complexes having low solubility may precipitate in concentrated medium.
3. pH and sodium bicarbonate concentration of the prepared medium are critical factors affecting cell growth. This is also influenced by amount of medium and volume of culture vessel used (surface to volume ratio). For example, in large bottles, such as Roux bottles pH tends to rise perceptibly as significant volume of carbon dioxide is released. Therefore, optimal conditions of pH, sodium bicarbonate concentration, surface to volume ratio must be determined for each cell type. We recommend stringent monitoring of pH. If needed, pH can be adjusted by using sterile 1N HCl or 1N NaOH or by bubbling in carbon dioxide.
4. If required, supplements can be added to the medium prior to or filter sterilization observing sterility precautions. Shelf life of the medium will depend on the nature of supplement added to the medium.

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