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Technical Datasheet

Basal Medium Eagle (BME)

With Earle's salts
Without L-Glutamine and Sodium bicarbonate

Product Code: AT242A

Product Description :

Basal Medium developed by Harry Eagle is a combination of essential nutrients in appropriate concentrations for monolayer cultivation of a wide variety of normal and transformed cells. The medium was initially developed as a result of studies to determine the nutritional requirements of HeLa cells and mouse fibroblast L cells in culture.

Although there are many versions of Basal Medium described by Eagle, the name Basal Medium Eagle applies to only the formulation developed for HeLa cells. Basal Medium Eagle when properly supplemented supports growth of variety of diploid or primary mammalian cell cultures. Modifications to the original BME have resulted in other media, including MEM and DMEM.

AT242A is Basal Medium Eagle with Earle's balanced salts. It does not contain L-Glutamine and Sodium bicarbonate

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	265.000
Magnesium sulphate anhydrous	97.720
Potassium chloride	400.000
Sodium chloride	6800.000
Sodium dihydrogen phosphate anhydrous	122.000
AMINO ACIDS	
L-Arginine hydrochloride	21.100
L-Cystine dihydrochloride	15.650
L-Histidine hydrochloride monohydrate	10.500
L-Isoleucine	26.200
L-Leucine	26.200
L-Lysine hydrochloride	36.480
L-Methionine	7.500
L-Phenylalanine	16.500
L-Threonine	23.800
L-Tryptophan	4.000
L-Tyrosine disodium salt dihydrate	25.950
L-Valine	23.400
VITAMINS	
Choline chloride	1.000
D-Biotin	1.000
D-Ca-Pantothenate	1.000
Folic acid	1.000
Nicotinamide	1.000
Pyridoxal hydrochloride	1.000
Riboflavin	0.100
Thiamine hydrochloride	1.000
i-Inositol	2.000
OTHERS	
D-Glucose	1000.000
Phenol red sodium salt	11.000

Directions:

1. Suspend 8.9gms in 900ml tissue culture grade water with constant, gentle stirring until the powder is completely dissolved. Do not heat the water.
2. Add 0.292gms of L-Glutamine powder (TC243) or 10ml of 200mM L-Glutamine solution (TCL012) and 2.2gms of sodium bicarbonate powder (TC230) or 29.3ml 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 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)
L-Glutamine (TC243)
200mM L-Glutamine solution (TCL012)
1N Hydrochloric acid (TCL003)
1N Sodium hydroxide (TCL002)
Foetal bovine serum (RM1112/RM10432)

Quality Control:

Appearance

White to light pink, Homogenous powder

Solubility

Clear Solution at 8.9g/L.

pH without Sodium bicarbonate

5.10-5.70

pH with Sodium bicarbonate

7.40- 8.00

Osmolality without Sodium Bicarbonate(mOsm/Kg H_2O)

230.00 -270.00

Osmolality with Sodium Bicarbonate(mOsm/Kg H2O)

280.00 -320.00

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.

Endotoxin Content

NMT 1EU/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