

Product Information

Basal Medium Eagle 10X

with Earle's Balanced Salts, without L-glutamine, without sodium bicarbonate

CATALOG NO. 50120C

Description

Basal Medium Eagle 10X (BME 10X) was developed by Eagle as a result of his studies to determine the essential nutritional requirements of HeLa cells in culture. This medium remains in wide use, having demonstrated its ability to support a variety of normal and transformed cells in culture. Modifications to the original composition of BME have given rise to other media, including Minimum Essential Medium (MEM) and Dulbecco's Modified Eagle's Medium (DMEM).

Formulation

Component (all components measured in mg/L)	
INORGANIC SALTS	
Calcium chloride anhydrous	740.000
Magnesium sulfate anhydrous	97.670
Potassium chloride	400.000
Sodium chloride	6800.000
Sodium phosphate monobasic monohydrate	1400.000
VITAMINS	
Biotin	1.000
D-calcium pantothenate	1.000
Choline chloride	1.000
Folic acid	1.000
i-inositol	2.000
Niacinamide	1.000
Pyridoxal HCl	1.000
Riboflavin	0.100
Thiamine HCl	1.000
AMINO ACIDS	
L-arginine HCl	21.000
L-cystine 2HCl	15.650
L-histidine free base	8.000
L-isoleucine	26.000
L-leucine	26.000
L-lysine HCl	36.470
L-methionine	7.500
L-phenylalanine	16.500
L-threonine	24.000
L-tryptophan	4.000
L-tyrosine 2Na dihydrate	25.950
L-valine	23.500
OTHER	
Dextrose anhydrous	1000.000
Phenol red sodium salt	106.200

Precautions

Use aseptic technique when handling or supplementing this medium. This product is for further manufacturing use. THIS PRODUCT IS NOT INTENDED FOR HUMAN OR THERAPEUTIC USE.

Storage

Store medium protected from light at 2 to 8 C.

Indications of Deterioration

Medium should be clear and free of particulate and flocculent material. Do not use if liquid media is cloudy or contains precipitate. Other evidence of deterioration may include color change, pH shift and degradation of physical or performance characteristics. Do not use the medium after the expiration date.

Preparation Instructions

Supplements, such as antibiotics, can be added prior to membrane filtration or added as sterile supplements to the sterile filtered medium. Storage conditions and shelf life of the supplemented medium may be affected by the nature of the supplements. Sterile serum should not be refiltered prior to or after supplementation into the sterile medium since growth promoting capacity may be reduced upon refiltration. SAFC Biosciences recommends that serum be added as a sterile supplement to the sterile medium.

Preparation of aseptic solutions

1. Aseptically transfer 100 mL of 10X medium to sterile 1 L container.
2. Add 800 mL of cell culture grade water (Catalog No. 59900C) to the container. Mix completely. Do not heat the solution.
3. Determine the pH of a small sample. If necessary, adjust the pH of the medium to 7.0 - 7.4 using NaOH 1N (Catalog No. 59223C) or HCl 1N.

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- Add cell culture grade water to the solution to bring it to the final volume. Mix completely.
- If desired, dispense the medium into sterile containers and store protected from light at 2 to 8 C.

Preparation of sterile filtered solutions

- Dilute 100 mL of 10X medium in 800 mL of cell culture grade water (Catalog No. 59900C). Mix completely. Do not heat the solution.
- While mixing the solution, adjust the pH to 6.9 - 7.1 using NaOH 1N (Catalog No. 59223C) or HCl 1N. The pH of this medium usually rises 0.1 - 0.2 units during filtration. For most applications, the optimal pH of the medium is 7.0 - 7.4.
- Add cell culture grade water to the solution to bring it to final volume. Mix completely. To avoid fluctuation in pH, keep the vessel closed until the medium is filtered.
- Sterile filter the medium using a 0.22 µm filter. A peristaltic pump or inert gas such as nitrogen can be used to provide positive pressure at 2 - 15 psi. Do not use CO₂ gas.
- Dispense medium into sterile containers using aseptic techniques. Store liquid medium protected from light at 2 to 8 C.

Characteristics

Endotoxin

Refer to Certificate of Analysis

Osmolality (as supplied)

Refer to Certificate of Analysis

pH (as supplied)

Refer to Certificate of Analysis

Sterility

No microbial growth detected

References

- Bryant, J.C. (1975), *Earle's Balanced Salt Solution: Preparation of the saline*. Tissue Culture Association Manual, Vol. 1, No. 4, 185-187.
- Eagle, H. (1955), *Nutritional needs of mammalian cells in tissue culture*. Science 122:501-504.
- Eagle, H. (1955), *Propagation in a fluid medium of a human epidermoid carcinoma strain K13*. Proc. Soc. Exptl. Biol. Med 89:362-364.
- Earle, W.R. (1943), *Production of malignancy in vitro: IV. The mouse fibroblast cultures and changes seen in the living cells*. J. Nat. Canc. Inst. 4:165-212.

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