
MEM, NEAA (Without Phenol Red) Product manual

Basic Information

Cat.NO	Size	Shelf	Form	Storage	Transportation
CMB0064	500mL	12 months	Liquid	Store at 2-8°C away from light	Room Temperature

Product Introduction

MEM medium (Minimum Essential Medium) is also called the minimum essential medium, minimum basic medium or low-limit Eagle medium. It was developed by Harry Eagle based on Eagle Basic Medium (BEM). It is the most basic and widely applicable medium and one of the most commonly used mediums in animal cell culture. MEM medium contains only 12 essential amino acids, glutamine and 8 vitamins. It has simple ingredients and is mainly used for the culture of adherent cells. It can also be used for other types of cell culture after the formula is modified. MEM medium containing NEAA (non-essential amino acids) is based on MEM medium and adds 7 NEAAs: L-alanine, L-glutamic acid, L-asparagine, L-aspartic acid, L-proline, L-serine and glycine. It can reduce the side effects of the production of non-essential amino acids by cells themselves during cell culture and effectively promote cell proliferation and metabolism.

The culture medium containing NEAA (non-essential amino acids) is based on the original culture medium and added with seven NEAAs: L-alanine, L-glutamic acid, L-asparagine, L-aspartic acid, L-proline, L-serine and glycine. It can reduce the side effects of the cells' own production of non-essential amino acids during cell culture and effectively promote cell proliferation and metabolism. Phenol red is used as a pH indicator in culture media to continuously monitor the pH of the culture medium. At low pH values, phenol red makes the culture medium yellow, while at higher pH values, the culture medium turns purple. It turns red at pH 7.2-7.4, which is most suitable for cell culture. However, phenol red also has some disadvantages. Studies have shown that phenol red can simulate the effects of steroid hormones (especially estrogen). Therefore, when using estrogen-sensitive cells (such as breast tissue), it is best to use a culture medium that does not contain phenol red. Phenol red can interfere with detection during flow cytometry analysis. In addition, the presence of phenol red in some serum-free culture medium formulas can interfere with sodium-potassium balance.

Instructions

1. Balance the culture medium and related solutions in a water bath or at room temperature, and prepare the culture medium required for the experimental cells;
2. Cell inoculation: Remove the cells to be cultured from the original culture container, wash with

appropriate culture medium or PBS, and adherent cells need to be digested with trypsin;

3. Collect the cells by centrifugation, centrifuge at 1000rpm for 3 min at room temperature, and discard the supernatant;
4. Add fresh culture medium to resuspend the cells. Then inoculate the cell suspension into the culture bottle with the corresponding volume of culture medium, mix gently, and culture at 37°C and 5% CO₂ saturated humidity. Observe and replace fresh culture medium regularly according to cell growth and cell density.

Precautions

1. During the entire process, be sure to pay attention to aseptic operation to avoid contamination;
2. To maintain the best use effect of this product, do not perform freeze-thaw treatment;
3. This product is only used for research or further research, not for diagnosis and treatment.