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# M199 (With HEPES) Product manual

## Basic Information

Cat.NO	Size	Shelf	Form	Storage	Transportation
CMB0074	500mL	12 months	Liquid	Store at 2-8°C away from light	Room Temperature

## Product Introduction

M199 stands for Medium 199, which was designed by Morgan et al. in 1950. It was originally used for nutritional research on chicken embryo fibroblasts and is now widely used in the culture of various animal cells, including some non-mammalian animal cells. M199 is particularly suitable for the culture of non-transformed cells. It is also commonly used in virology, vaccine production, and the culture of rat pancreatic epithelial cells and mouse lens tissue. Compared with other basal culture media, M199 contains unique ingredients, including adenine, adenosine, hypoxanthine, thymine, and other vitamins. M199 has two balanced salt components. Earle's salt components are often used in CO<sub>2</sub> environments, and Hank's salt components are used in non-CO<sub>2</sub> environments.

This product contains a variety of ingredients such as amino acids, vitamins, inorganic salts, etc. required for various types of cell culture, but does not contain proteins, lipids or any growth factors. Therefore, this product needs to be used with serum or serum-free supplements.

HEPES is an excellent biological buffer with no toxic effect on cells. The culture medium with HEPES added can maintain a constant pH range for a long time, which can effectively prevent the adverse effects of large pH fluctuations in the culture medium on cell growth.

## 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% CO<sub>2</sub> 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.