DMEM/F12, powder, with HEPES

Cat. No. : PM150310P

Size: 5×1L / 1×10L / 1×50L / 100L / 500L

General Information

Product Form	Powder
D-Glucose	3151 mg/L
Concentration	12.04 g/L
HEPES	15 mM
L-Glutamine	2.5 mM
$NaHCO_3$	Negative
Phenol red	8.1 mg/L
Sodium pyruvate	0.5 mM
Storage	2-8℃, Shading Light
Shipping	Room Temperature
Expiration date	36 months

Background

The DMEM/F12 medium is based on DMEM medium, adding more abundant nutrients in F12 medium, containing a variety of trace elements, widely used in the culture of a variety of mammalian cells. At the same time, DMEM/F12 medium is often used as a basis for the development of serum-free media, and is also suitable for the culture of mammalian cells at low serum content and clonal density culture.

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

This product contains amino acids, vitamins, inorganic salts and other ingredients required for cell culture, but does not contain proteins, lipids or any growth factors, so the product needs to be used with serum or serum-free additives.

Preparation method

1. The preparation water should be purified water, ultra-pure water or water for injection (WFI), and the water temperature should be controlled between 20-30℃ during the preparation process.
2. Measure 90% of the final volume preparation water to the solution preparation system. Start stirring, and avoid generating bubbles. For example, if 1 L is required, add 900 mL of preparation water here. And it's recommended that the power output per unit volume (P/V) of the mixing system is greater than 10 W/m^3.
3. Weigh the appropriate amount of powder according to the concentration of 12.04 g/L accurately , and add it to the container prepared in step 2. Stir for more than 20 minutes dissolve all powder completely.
4. After the solution is clear, add $NaHCO_3$ at a concentration of 1.2 g/L, continue stirring for 5-10 minutes until

dissolved, then add ultra pure water to adjust the volume to the 100% of required.

5. If necessary, adjust the pH to 7.20-7.30 with 1 mol/L NaOH solution or 1 mol/L HCl solution. Since filtration will slightly increase the pH, the pH value here is lower than the target pH value (7.20-7.40).
6. The prepared solution should be sterilized using a 0.2 μm pore size filter membrane under positive pressure (ensure aseptic technique).
7. After filtration,a small amount of liquid culture medium can betaken for quality inspection, and use only after passing the test.
8. The filtered liquid medium should be used immediately or stored in glass bottles, culture medium bottles (PET), or single-use storage bags with an oxygen-barrier coating at 2-8℃ away from light. The liquid medium has a shelf life of 1 year under these conditions.

Notes

1. Please wear a lab coat and use disposable gloves and a mask during operation.
2. To ensure the optimal performance of this product, please strictly adhere to the recommended storage conditions for its preservation.
3. This product is intended for scientific research exclusively or as a raw material in the production process, and must not be applied for clinical diagnosis or treatment.