

Ham's F-12, powder

Cat. No. : PM150810P

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

General Information

Product Form	Powder
D-Glucose	1802 mg/L
Concentration	10.7 g/L
HEPES	Negative
L-Glutamine	1 mM
NaHCO₃	Negative
Phenol red	1.2 mg/L
Sodium pyruvate	Negative
Storage	2-8°C, Shading Light
Shipping	Room Temperature
Expiration date	36 months

Background

Ham's F-12 Nutrient Mix was designed by Ham in 1969 based on Ham's F-10 Nutrient Mixture, initially for serum-free culture of CHO cells. Ham's F-12 is often used as a basic culture medium for serum-free culture, and is especially suitable for single-cell culture and clonal culture at low serum content, and is also widely used in the culture of cancer cells and primary cells after adding serum, such as rat liver cells, rat prostate epithelial cells, chondrocytes, rat myoblasts, chicken embryonic cells, etc. In addition, Ham's F-12 mixed with DMEM and other volumes results in a more nutrient-rich and widely used DMEM/F12 medium.

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°C 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/m³.
3. Weigh the appropriate amount of powder according to the concentration of 10.7 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 NaHCO₃ at a concentration of 1.176 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 be taken 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°C 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.