MCDB 131, Powder, without L-glutamine

Cat. No. : PM150122P
Size: 15×1L / 1×10L / 1×50L / 100L / 500L

General Information

Product Form	Powder
D-Glucose	1000 mg/L
Concentration	10.15 g/L
HEPES	Negative
L-Glutamine	Negative
$NaHCO_3$	Negative
Phenol red	12.4 mg/L
Sodium pyruvate	110 mg/L
Storage	2-8℃, Shading Light
Shipping	Room Temperature
Expiration date	36 months

Background

MCDB131 is a low-protein, serum-free culture medium designed for specific cells. MCDB 131 is a kind of MCDB medium designed and developed by Knedler and Ham. It was originally used to culture human microvascular endothelial cells (HMVEC). In addition to endothelial cells, MCDB 131 medium can also be used for other cell types, such as hepatocytes, smooth muscle cells, cardiomyocytes, etc.

MCDB 131 medium is different from conventional media because it contains trace elements, putrescine, adenine, thymine, and higher concentrations of amino acids and vitamins. It is often used in combination with epidermal growth factor (EGF), hydrocortisone, glutamine, and low concentrations of serum, depending on the specific cell type.

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/m3.
3. Weigh the appropriate amount of powder according to the concentration of 10.15 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 1.18 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. When stored at 2-8℃ with shading light, the liquid medium has a shelf life of 1 year.
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℃ in Shading Light. the liquid medium has a shelf life of 1 year under these conditions.

Note

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.