

Complete Medium

DMEM (10% FBS) High Glucose

1. Product Overview

Complete medium DMEM Medium (10% FBS) High Glucose is formulated with all essential nutrients required for adherent cell culture, enabling robust cell growth and proliferation without supplementation of additional basal components.

Employing advanced dynamic freeze-drying technology, this product lyophilizes a complex nutrient system comprising high-glucose DMEM basal medium, 10% fetal bovine serum (FBS), antibiotics, L-glutamine, and other essential additives into a homogeneous powder, while retaining the native structural integrity and biological activity of all constituents. It can be rapidly and conveniently reconstituted via gentle mixing and shaking, delivering sufficient energy and comprehensive nutritional support for highly metabolically active and fast-proliferating cells.

Supplemented with 10% FBS and 1% penicillin–streptomycin solution, and featuring a stable pH range of 7.00–7.40, this medium is suitable for the culture of a broad spectrum of mammalian cell lines. It supports routine culture, subculture, and cryopreservation of adherent cells including human embryonic kidney cells (HEK293) and mouse embryonic fibroblasts (3T3).

2. Core Ingredients and Functions

The table below lists the major components of this complete culture medium and describes the role of each:

Component	Function	Typical Concentration
Basal culture medium (DMEM high glucose)	It provides essential nutrients such as inorganic salts, amino acids, and vitamins to support cell metabolism and biosynthesis.	89 %
Fetal bovine serum (FBS)	Supplementing growth factors, hormones, and adhesion factors promotes cell proliferation and adhesion.	10%
Penicillin-Streptomycin	Inhibit bacterial contamination (penicillin: 100 U/mL; streptomycin: 100 µg/mL).	1%
L-glutamine	Key substances for cellular energy metabolism.	4 mM
Sodium pyruvate	It provides energy, acts as an antioxidant, maintains pH stability, and promotes cell growth.	0.11 g/L
Sodium bicarbonate	Maintaining pH stability of the culture medium	3.7g/L

Note: Actual component composition may vary by product variant. Refer to the Certificate of Analysis (CoA) for lot-specific information.

3. Storage Conditions

Storage Temperature	2 – 8 °C (Refrigerate; do not freeze)
Protection from Light	Store in the dark or in amber/foil-wrapped containers to prevent photodegradation
Shelf Life (Unopened)	24 months from date of manufacture
Shelf Life (Opened)	Use within 3-4 weeks after opening; aliquot to minimize freeze-thaw or repeated warming
Container	Maintain in original sealed bottle or sterile, airtight container

4. Preparations Before Use

4.1 Visual inspection

- Confirm that the lyophilized culture medium powder has not dissolved, the vial is undamaged and leak-free, and the liquid is clear without turbidity or sediment. If any abnormalities are found, contact the supplier immediately for a replacement.

4.2 Equilibration

- Warm the medium to 37 °C in a water bath or incubator (15–30 minutes) before use.
- Do not warm more medium than needed for immediate use; discard any unused warmed medium at the end of the working day.

4.3 Sterility

- All components of this medium have been sterile-filtered (0.2 µm) by the manufacturer.
- Always handle medium under aseptic conditions using a certified biosafety cabinet (BSC).
- Inspect the bottle for leaks, damaged seals, or signs of contamination before use.

5. Product Specifications

Product Name	Complete medium DMEM Medium (10% FBS) High Glucose
Product Code	HD6190-100; HD6190-500; HD6190A-100; HD6190A-500
Volume	100ml/bottle, 10*100ml/box; 500ml/bottle

6. Instructions for Use

6.1 Temperature Equilibration:

- Remove the reagent bottle from the 2 – 8°C refrigerator before use, and let it stand for 10 minutes to equilibrate to room temperature.

6.2 Powder Settling:

- Press the top of the bottle cap to allow the powder inside to fall smoothly.

6.3 Dissolution & Mixing:

- Shake the bottle vigorously for 1 minute, and observe until the powder is completely dissolved.

6.4 Removal of Powder Cartridge:

- Remove the bottle cap, gently twist it to detach the powder cartridge, and discard it.

6.5 Ready for Use:

- The reagent is ready for normal use once fully dissolved, with a pH range of 7.00–7.40.

7. Reminder

- For Research Use Only (RUO). This product is not intended for use in diagnostic procedures or therapeutic applications.
- Under ambient temperature conditions, the product can maintain its quality for up to one week. It is recommended to use ice packs for transportation; **do not use dry ice**. In northern regions where freezing may occur in winter, please thaw the product completely before storage. Store the product in a refrigerator at 2–8°C.
- Due to the physical effects of the freeze-drying process, trace amounts of slowly dissolving substances may be present. This phenomenon does not affect the performance of the culture medium, and these substances will be fully utilized during cell culture. It is not caused by product contamination, so the product can be used with confidence.
- Use appropriate personal protective equipment (PPE) including gloves, lab coat, and eye protection when handling cell culture media.
- All biological materials should be treated as potentially hazardous. Follow your institution's biosafety protocols.
- Dispose of spent medium, cell culture waste, and contaminated materials in compliance with local environmental and biosafety regulations.
- Do not use after the expiration date printed on the label.

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