



CelliMax® CHO FGb Medium

Instructions for Use

Cat. No.: CPDP064(Powder)

Issued on April 29, 2026

Product Description

CelliMax® CHO FGb Medium is a chemically defined (CD) feed medium containing only amino acids. When used in combination with CelliMax® CHO FGa Medium or CelliMax® CHO FGa plus Medium, it supports high-density growth of various CHO cell lines and enhances protein expression.

Intended Use

This product is intended for research use and for the manufacture of biological products derived from cell culture. It is not intended for direct administration to humans or for therapeutic use.

Applications

CelliMax® CHO FGb Medium is designed for use with CHO cell lines, including CHOZN®, CHO-K1, CHO-DG44, CHO-S and CHO-DXB11.

Storage Conditions

1. Store the powder medium sealed at 2–8 °C, protected from light.
2. Store the prepared liquid medium sealed at 2–8 °C, protected from light.

Shelf Life

1. The unopened powder medium has a shelf life of 2 years. Use promptly after opening. Refer to the label for details.
2. Use the liquid medium promptly after preparation.
Note: The stated shelf life is based on CelluPro's general testing methods. Users may conduct separate shelf life studies for specific applications or projects.

Preparation of Required Equipment and Materials

- ✧ Clean mixing vessel
- ✧ High purity water (HPW) such as Water for Injection (WFI) or equivalent
- ✧ Liquid mixing system with adequate mixing efficiency
- ✧ Calibrated pH meter (Recommended calibration points: 6.86, 9.18, 12.46).
- ✧ Calibrated osmometer (Recommended calibration points: 0, 300, and 700 mOsmol/kg)
- ✧ Calibrated turbidimeter (Recommended calibration points: 0.02 NTU, 20.0 NTU, 100 NTU, and 800 NTU)
- ✧ 6 mol/L NaOH solution
Note: Other concentrations of NaOH solution may be used with appropriate adjustment. NaOH powder is not recommended, as localized high pH may cause damage.
- ✧ Low-binding filter membranes (0.2 µm or 0.22 µm), such as polyvinylidene difluoride (PVDF), polyether sulfone (PES), or cellulose acetate (CA)

Preparation Recommendations

- ◆ Small-scale preparation (< 1 L) is not recommended to minimize variability.
- ◆ All utensils and consumables in contact with the medium should be free of mycoplasma and endotoxin contamination.
- ◆ Filtration and liquid storage systems in contact with the filtered medium should be sterile.
- ◆ Prefiltration at 0.45 µm or 0.8 µm is recommended to improve filtration efficiency and throughput.
- ◆ Dissolution time depends on preparation scale and mixing efficiency. All mixing times provided are reference values for small-scale preparation (e.g., <

50 L). For larger-scale preparation or systems with lower mixing efficiency, mixing times should be extended as appropriate to ensure complete dissolution and adequate mixing.

- ◆ Minimize total preparation time where possible, as prolonged preparation may increase the risk of bioburden and endotoxin contamination, provided that adequate mixing efficiency and complete powder dissolution are ensured.

Q.S. Method

- **Q.S. to final volume:** Adjust to the final volume (V_{final}). This method is recommended for small-scale preparation.
- **Q.S. to final weight:** Adjust to the final weight ($m_{\text{final}} = \rho \times V_{\text{theoretical}}$). This method is recommended for large-scale preparation.
- Recommended density for weight-based adjustment of CelliMax® CHO FGb Medium: **$\rho = 1.052 \text{ kg/L}$** .
Note: Using the preparation of 1000 L ($V_{\text{theoretical}}$) of CelliMax® CHO FGb Medium by weight-based adjustment as an example, the target final weight (m_{final}) is calculated as follows: $m_{\text{final}} = \rho \times V_{\text{theoretical}} = 1.052 \text{ kg/L} \times 1000 \text{ L} = 1052 \text{ kg}$. Adjust the medium solution to a final weight of 1052 kg. The resulting final volume is 1000 L.
- Prior to medium preparation, determine the appropriate Q. S. method based on the target preparation volume and the available equipment for volume adjustment (e.g., volumetric devices or weighing systems).

Preparation Method

1. Add HPW, such as Water for Injection (WFI) or equivalent, to **70–75%** of the final volume in a clean mixing vessel. Set the initial temperature to **25–30 °C**.
**The preparation temperature is for reference only. Very low temperature will reduce dissolution efficiency.*
2. Start stirring. Adjust the stirring speed to ensure rapid and complete wetting of the powder **while minimizing foaming**.
3. While stirring, **slowly** add **88.00 g/L*** powder medium to the vessel, avoiding formation of clumps. Mix **at least 30 minutes** until dissolved. The solution may **appear slightly turbid** at this stage.
**The weight of all materials described herein should be controlled within a deviation of $\pm 1\%$ where possible. If such deviation cannot be avoided, it should be evaluated based on actual conditions.*
4. **Slowly** add 6 mol/L NaOH solution to adjust the pH

to **11.00–11.40** until the solution becomes **clear**, then continue stirring for **15–30 minutes***.

**The pH of the medium may decrease slightly over time during mixing.*

5. After stirring, measure the pH of the medium solution. If the solution pH is below **11.00**, **slowly** add 6 mol/L NaOH solution to adjust the pH to **11.00–11.40**.
Note 1: The amount of NaOH solution added should be carefully controlled to avoid excessive adjustment, which may result in osmolality outside the specified range.
Note 2: If the pH falls outside the specified range during adjustment, it may be readjusted using 6 mol/L sodium hydroxide solution or 6 mol/L hydrochloric acid solution. Such adjustments may result in osmolality outside the specified range or affect the stability of medium components.
6. Add HPW (e.g., WFI or equivalent) to the final volume or target final weight* according to the determined Q.S. method. Continue stirring for **10–15 minutes**.
**Detailed procedures and precautions for adjustment (volume- or weight-based) are provided in the “Q.S. Method” section of this document.*
7. The osmolality should be **200–260 mOsmol/kg** (tested at 5-fold dilution), and turbidity should be **< 3.0 NTU**.
**It is recommended to use a low-binding filter membrane type, such as PVDF, PES or CA.*
8. Use immediately or store sealed at **2–8 °C**, **protected from light**.

Preparation Before Use

- The medium does not contain glucose.
- The medium does not contain L-glutamine.

Culture Guidelines

CelliMax® CHO FGb Medium is recommended for use in combination with CelliMax® CHO FGa Medium or CelliMax® CHO FGa plus Medium. For the recommended fed-batch strategy, refer to the Instructions for Use of CelliMax® CHO FGa Medium or CelliMax® CHO FGa plus Medium.

Ordering Information

Table 1 Ordering information

Product	Order Reference No.	Format
CelliMax® CHO FGb Medium	CPDP064-1L CPDP064-10L	Powder

**For more information, please visit www.cellupro.com or contact sales@cellupro.com.*

**Specifications are subject to change without prior notice, except for process changes.*

©2026 CelluPro, Ltd. All rights reserved.
CelliMax® and CelluPro® are registered trademarks of CelluPro, Ltd.