

ExCell Bio

OptiVibro[®]CA01 β Feed Medium SF

For Research and Manufacturing Use
Not Intended for Diagnostic and Therapeutic Use

User Manual

Catalog Number CA000-N021
CA000-N022
CA000-N023
CA000-N024



| Product description

OptiVibro® CA01β Feed Medium SF is a dry powdered cell culture feed supplement that is specifically designed to improve the performance of fed-batch processes for Chinese hamster ovary (CHO) cell lines. It is a chemically defined (CD), animal-derived component-free (ADCF) product that does not contain any growth factors, peptides, hydrolysates, phenol red. This makes it a safe and reliable supplement for bioprocessing.

To achieve the best results, it should be used in combination with OptiVibro® CHO CA01α Feed Medium SF (Catalog no.: CA000-N011). This combination has been shown to increase the yield of monoclonal antibodies and other proteins in CHO fed-batch culture processes.

Product	Catalog no.	Pack Size	Storage	Shelf life
OptiVibro® CA01 β Feed Medium SF	CA000-N021	0.5 L powder	2°C to 8°C; Store dark and dry	24 months
	CA000-N022	1 L powder		
	CA000-N023	5L powder		
	CA000-N024	10L powder		

| Medium preparation

Instructions for preparing 1L of OptiVibro® CA01 β Feed Medium SF:

1. Measure 80% of the final volume WFI or distilled water in a clean vessel.
2. Slowly add 108.76g CA01β Feed Medium SF powder to the water, mix for 60 minutes.
3. Adjust the pH to 10.9 ~ 11.3 with 10N NaOH or solid NaOH and mix for 60 minutes.
4. Adjust the pH to 11.4 while stirring for an additional 10 minutes.
5. QS to 1L and continue stirring for another 10 minutes.
6. Measure and record the final pH and osmolality.
7. Sterilize immediately by membrane filtration (< 0.22 microns), and store it for up to 3 months at 2 to 8°C , away from light.

Note: To prevent excessive heat release during NaOH addition, it's important to add 10N NaOH or solid NaOH slowly, in multiple increments. Before adding the NaOH solution to adjust the pH, it's normal for the solution to appear cloudy. However, the final medium should be clear once the NaOH solution has been added and the pH has been adjusted.

| Storage condition

OptiVibro®CA01β Feed Medium SF should be protected from light at 2°C to 8°C in a dry environment, and the shelf life is 24 months.

| Fed-batch process recommendations

To achieve optimal results, OptiVibro® CA01 β Feed Medium SF should be used in combination with OptiVibro® CHO CA01 α Feed Medium SF (CA000-N011), with the recommended amount of CA01 β being 10% of CA01 α . Please note that different CHO cell lines have varying metabolic rates and nutrient requirements, so it is recommended to optimize the feeding method according to the specific needs of your cell line.

Here are some general guidelines to get started:

1. Use cells in mid-log phase of growth with a seeding density of $0.6-1.0 \times 10^6$ cells/mL and viability $\geq 95\%$.
2. Cultivate the cells in a 125 mL flask at 37 °C with 80% relative humidity, 5% CO₂, and shaking at 120-150rpm.
3. For feeding, OptiVibro® CHO CA01 α Feed Medium SF (at concentrations of 3%, 4%, 5%, 5%, and 5%) and OptiVibro® CA01 β Feed Medium SF (at concentrations of 0.3%, 0.4%, 0.5%, 0.5%, and 0.5% of initial culture volume) should be added on the 3rd, 5th, 7th, 9th, and 11th days of cell culture.
4. When the glucose concentration in the culture drops below 2-4g/L, supplement with 400g/L glucose solution to achieve a concentration of 4-6g/L. For cell lines with high glucose consumption, supplement glucose to 6-8g/L daily after the 5th day of culture.