

ExCell Bio

OptiVibro® CA01α Feed Medium SF

For Research and Manufacturing Use

Not Intended for Diagnostic and Therapeutic Use

User Manual

Catalog Number CA000-N011

CA000-N012

CA000-N013



| Product description

OptiVibro® CA01 α 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 CA01 β Feed Medium SF (Catalog no.: CA000-N021). 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 α Feed Medium SF	CA000-N011	1 L powder	2°C to 8°C;	24 months
	CA000-N012	10 L powder	Store dark and	
	CA000-N013	100 L powder	dry	

| Medium preparation

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

1. Measure 80% of the final volume WFI or distilled water in a clean vessel.
2. Slowly add 158.94g CA01 α Feed Medium SF powder to the water, mix for 60 minutes.
3. Adjust the pH to 6.6 ~ 7.0 with 10N NaOH and mix for 60 minutes.
4. Adjust the pH to 6.5-7.0 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: It is normal for the solution to remain cloudy before adding the NaOH solution to adjust the pH. It should become clear once the NaOH solution is added and the pH is adjusted to between 6.6 and 7.0.

| Storage condition

OptiVibro® CA01 α 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 α Feed Medium SF should be used in combination with OptiVibro® CHO CA01 β Feed Medium SF (CA000-N021), 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® CA01 α Feed Medium SF (at concentrations of 3%, 4%, 5%, 5%, and 5%) and OptiVibro® CHO 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.