

# CELLiST™

Cell culture media  
**For better lives**

**CELLiST™ CHO Perfusion Media\_P1**

Shortcut to  
Official Channel



# CELLiST™ CHO Perfusion Media\_P1

## | Overview

Ajinomoto Group collaborated with Chugai Pharmaceutical to improve productivity and culture longevity in perfusion culture. Through our joint development project, we optimized both the culture process and the medium composition. By focusing on refining the medium and process, we achieved significant advancements, resulting in higher productivity and longer culture longevity. Our proprietary technologies, such as refined iron sources and exclusive Cysteine technology, position us as leaders in enhancing perfusion culture productivity.

## | Key Features of CELLiST™ CHO Perfusion Media\_P1

- Easy to prepare and use, easily dissolves at neutral pH.
- Facilitates sustained high cell density and viability throughout the perfusion process.
- Maintains appropriate cell growth rate, reducing requirement for excessive cell bleeding.
- Optimized for suppressing cell death, reducing membrane fouling.

## | Properties

- Chemically defined, protein-free medium without any animal-derived components.
- Suitable for all CHO cell lines and their derivatives.
- High performance in both cell growth and protein production.
- Test samples as well as bulk size orders are available.
- Flexible application for easily replacing any existing media platform.
- Manufactured in a GMP-compliant factory.



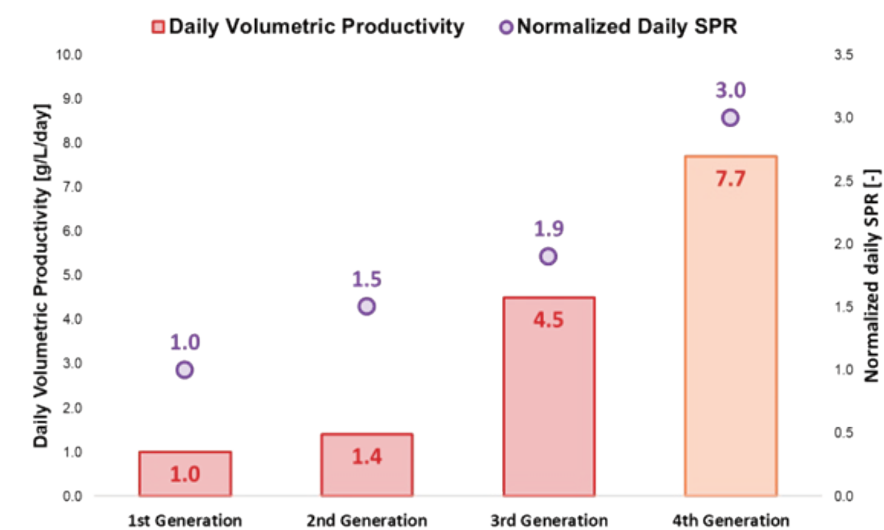
## | Background

The advent of perfusion culture has addressed many challenges faced in batch or fed-batch culture, such as short cultivation periods and purification issues due to high cell density. As a result, biopharmaceutical companies are increasingly adopting perfusion culture. CELLiST™ has developed high-performance perfusion medium for CHO cells, designed for high productivity beyond fed-batch processes. Perfusion media\_P1 maintains high cell viability and productivity with a low bleeding rate over extended periods, thanks to exclusive Cysteine technology. This cost-effective solution is ideal for long-term perfusion processes, leveraging Ajinomoto Group's media science expertise.

## | Specifications

Format	Powder
Concentration	37.4 g/L
Includes	Poloxamer
Storage Condition	Store in refrigerated (2-8C), dark conditions
Shelf Life	12 months
Item Description	Powder, chemically-defined and animal origin free medium.

## | Media Performance



- Increasing poloxamer concentration enhanced cell-specific productivity and viability by protecting cells from shear stress.
- Changing the iron source controlled cell proliferation rate, which helped maintain appropriate VCD.
- Improvements in the media composition, including L-Cysteine, enhanced productivity.

[https://www.ajinomotocellistkorea.com/en/technicalmaterial\\_en](https://www.ajinomotocellistkorea.com/en/technicalmaterial_en)



Related Technical Documents (QR-Code)

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## Liquid Media Preparation

### CELLiST™ CHO Perfusion Media\_P1 (1,000 mL Preparation)

1. Add 37.4 g of CELLiST™ CHO Perfusion Media\_P1 to 800 mL cell-culture-grade water (room temperature).
2. Wash the remaining product into the container using cell-culture-grade water.
3. Stir until all powder is dissolved.
4. Add 3.2 g of sodium-bicarbonate.
5. Stir until all particles are completely dissolved.
6. Adjust the volume to 1,000 mL using cell-culture-grade water and stir until the mixture is uniform.
7. Filter the medium in a biosafety cabinet, using a membrane filter with pore size of 0.2 to 0.22  $\mu\text{m}$  in diameter.  
(Reference value - pH: 7.0-7.4 / Osmolality: 340-360 mOsm/kg)
8. Store in a refrigerated (2–8°C), dark environment until use.

### L-Cystine (200 mL Preparation)

1. Add 2.1 g of L-Cystine to 160 mL cell-culture-grade water (room temperature).
2. Wash the remaining product into the container using cell-culture-grade water.
3. Add 2.5 mL of 8N NaOH.
4. Stir until all powder is dissolved.
5. Adjust the volume to 200 mL with cell-culture-grade water and stir until the mixture is uniform.
6. Filter the medium in a biosafety cabinet, using a membrane filter with pore size of 0.2 to 0.22  $\mu\text{m}$  in diameter.  
(Reference value - pH: 7.0-7.4 / Osmolality: 340-360 mOsm/kg)
7. Store in a refrigerated (2–8°C), dark environment until use.

### Usage Guidelines

- Right before use, aseptically add 2–6 mM L-glutamine source to CELLiST™ CHO Perfusion Media\_P1.
- For main culture, use CELLiST™ CHO Perfusion Media\_P1 prior to starting perfusion.
- After initiating perfusion, it is necessary to supplement with L-Cystine along with Perfusion Media\_P1 to maintain adequate culture performance. We recommend using a ratio of 95:5 (Perfusion Media\_P1 : L-Cystine).
- CELLiST CHO Perfusion Media\_P1 and L-Cystine should be prepared and supplied to the culture independently.
- Note: CELLiST™ CHO Perfusion Media\_P1 can also be used for seed cultures.

CELLiST™





Eat Well, Live Well.



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