Culture Media Engineering

PRODUCTS PORTFOLIO

Grow Better Together

Welcome to the C1 culture Media Engineering products portfolio featuring a wide range of essential pharmaceutical media and feeds for maximizing your processes

C1 CULTURE MEDIA ENGINEERING

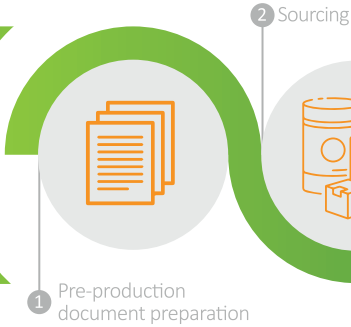
Introduction

C1 Culture Media Engineering was founded in early 2018, fully complying with Food and Drug Organization regulations and holding GMP certifications. Located in the knowledge enterprise area near Tehran (Safadasht District of Malard County), we proudly stand as the Middle East's sole producer of powder cell culture media and feeds. We employ cutting-edge technology and superior raw materials, backed by a team of highly educated and skilled professionals. Our mission is to deliver high-quality and best-in-class products that rivals top industry standards and fulfills the needs of the pharmaceutical industry.

Partnership Opportunities

We are eager to collaborate with competent and reliable representatives to support your projects. Whether you need small-scale or large-scale batches, C1 Culture Media Engineering is equipped to meet your requirements. For more information on our offerings, please refer to the products section.

DRY POWDER PRODUCTION PROCESS



Why powder Cell culture media?

Powder Cell culture media are preferable for high-volume production for several reasons:

1. **Light Sensitivity:**
   Powder culture media are less sensitive to light, maintaining their integrity during storage and use.

2. **Extended Shelf Life:**
   Without liquids, powder culture media have a longer shelf life, reducing risks of contamination and degradation.

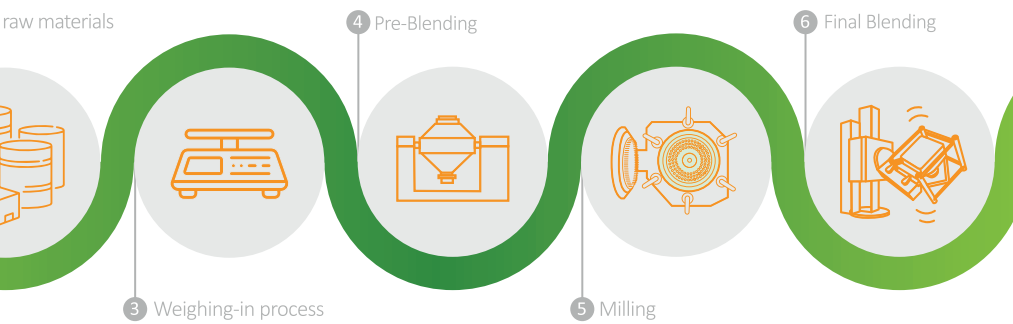
3. **Easier Storage:**
   The powder form allows for easier control over the size and packaging of the final product, enhancing consistency and convenience to store.

4. **Cost Efficiency:**
   Powder media reduce transportation and storage costs, offering a more economical solution for producers.

Feasibility and equipment

	GLP: Qualification and development	cGMP: Commercial Scale Production
Feasibility	R&D on new products	Full GMP feasibility on custom orders
Batch records	Full batch record created	Full batch record created
Equipment	• Tracked weigh and dispense • Lab-scale Pin Mill and double cone blender	• Tracked weigh and dispense • Large scale Pin Mill and double cone blenders
Batch sizes	DPM*: 1- 4kg	DPM: 10- 700 kg
Quality Control	Some tests are available for additional fee, including pH, Osmolality, Bioburden, Bacterial Endotoxin, and Growth promotion test	–

*DPM: Dry Powder Media

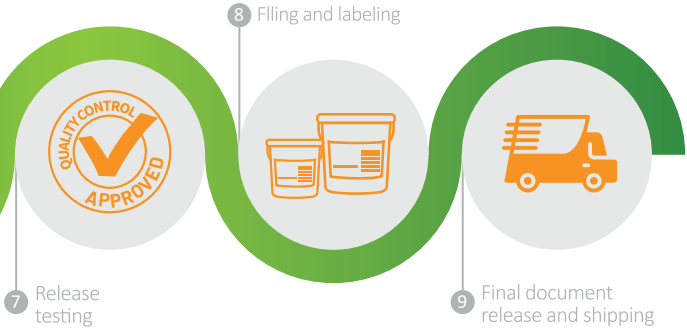


Products

Classical Media	
DMEM	✓
DMEM - F12	✓
RPMI - 1640	✓
IPL - 41	✓

Special Media & Feed	
First CHOice® medium	✓
First CHOice® Feed Alpha	✓
First CHOice® Feed Alpha+	✓
First CHOice® Feed Beta	✓
C1 - ICM	Coming Soon
C1 - BCM	Coming Soon

First CHOice® medium is a highly productive cell culture medium, specifically optimized for mammalian cells culture in suspension.
Carefully balanced to promote excellent cell growth and high productivity in both batch and fed-batch processes, First CHOice® medium offers reliable and consistent performance.



Our First CHOice® Quality Commitment

- Chemically defined products
- No animal-derived components

Developed in close collaboration with our customers and partners, the First CHOice® media platform is particularly effective with CHO-S, CHO-DG44, and CHO-K1 cell lines. It is designed to minimize the formation of stress-induced metabolic byproducts like lactate and ammonium, ensuring high product quality and cell viability throughout the production process.

Key Features

- Chemically Defined- Free from raw materials of animal origin, serum-free, and compliant with regulatory standards.
- Seamless Scalability- Engineered to work as part of a complete system, facilitating easy scale-up from research to production.
- Delivers protein titers that are equivalent to or better than those of leading competitors.

Ordering Information

Contains	Cat.No.		
	C1M001FC	C1M010FC	C1M011HT
L-Glutamine	–	–	–
C1S1 Supplement*	–	✓	✓
Hypoxanthine/Thymidine	✓	✓	–
Sodium Bicarbonate	–	–	–
HEPES	✓	✓	✓
Phenol Red	–	–	–
Option Of Ordering	Needs C1S1	–	–

* Stable Glutamine

Related Products

Product Name	Cat.No.
First CHOice® Feed Alpha	C1F002FA
First CHOice® Feed Alpha	C1F013FA
First CHOice® Feed Alpha plus	C1F008AP
First CHOice® Feed Alpha plus	C1F009AP
First CHOice® Feed Beta	C1F003FB
C1S1 supplement	C1S001CC

First CHOice® Feed Alpha / Alpha+ is specifically formulated to enhance cell growth when paired with First CHOice® medium.
This feed is Chemically Defined and Protein-Free, made entirely from non-animal origin components, making it ideal for fed-batch cultures.

Key Features

- Optimized Nutrient Profile- Feed Alpha & Alpha+ (advanced version of Feed Alpha) provides essential nutrients that are crucial during the later stages of cell growth, preventing nutrient depletion and ensuring sustained cell health and viability.
- Stress Reduction- By maintaining a balanced metabolic environment, Feed Alpha / Alpha+ minimizes the accumulation of toxic byproducts, like lactate and ammonium, which can otherwise stress the cells and reduce product quality.
- Consistency- The chemically defined nature of Feed Alpha & Alpha+ ensures batch-to-batch consistency, critical for maintaining the reproducibility of your processes.

Ordering Information

Contains	Cat. No. (Feed Alpha)	
	C1F002FA	C1F013FA
C1-FASA Supplement*	–	✓
Phenol Red	–	–
Option Of Ordering	Needs C1-FASA	–

* Succinic Acid

Contains	Cat. No. (Feed Alpha+)	
	C1F008AP	C1F009AP
C1-FASA Supplement	–	✓
Phenol Red	–	–
Option Of Ordering	Needs C1-FASA	–

Related Products

Product Name	Cat.No.
C1-FASA supplement	C1S002FA

First CHOice® Feed Beta is another key component of our cell culture system, designed to complement the First CHOice® medium. Like our other feeds, Feed Beta is Chemically Defined and Protein-Free, and is made entirely from non-animal origin components. Feed Beta is formulated to further optimize cell growth and productivity, making it an essential part of high performance fed-batch cultures.

Key Features

- Customized for High Performance Cultures- Designed for more demanding fed-batch cultures, Feed Beta is ideal for processes that require the highest levels of productivity and product consistency.
- Reliable Performance- Feed Beta formulation ensures consistent performance across multiple batches, making it a dependable choice for scaling up your cell culture operations.

Ordering Information

Cat. No.	C1F003FB

As the demand for recombinant vaccines, such as those for COVID-19, influenza, and HPV, continues to rise, the importance of insect cell culture in vaccine production has become more pronounced. Recognizing this need, C1 Culture Media Engineering has developed **C1-ICM**, a sophisticated culture medium specifically designed for the growth of insect cells, particularly the SF9 cell line. C1-ICM is a serum-free medium that meets the unique nutrient requirements of insect cells, which be addressed to ensure optimal growth and infection rates in cells. This complex formulation supports robust cell growth, facilitating the effective production of biotechnological vaccines, and making it an ideal choice for both research and large-scale manufacturing.

Dulbecco's MEM (DMEM) is one of the most widely used modifications of Basal Medium Eagle (BME), featuring a fourfold increase in the concentration of amino acids and vitamins compared to the original formula. To further enhance cell culture conditions, this medium also includes non- essential amino acids, trace elements, and an elevated bicarbonate concentration. DMEM is available in two main glucose concentrations, the standard 1000 mg/L and the high-glucose variant at 4500 mg/L. Originally developed for culturing mouse embryonic cells, DMEM has become a staple in cell culture labs, supporting a wide variety of mammalian cells. Its versatility and effectiveness make it a go-to medium for researchers worldwide.

Ordering Information

Contains	Cat.No.	
	C1M005DM04	C1M005DM05
Glucose	4.5 g/L	1 g/L
L-Glutamine	✓	✓
Phenol Red	✓	✓
Sodium Pyruvate	✓	✓
HEPES	-	-
Sodium Bicarbonate	-	-

DMEM/F12 is a 1:1 mixture of Dulbecco's Modified Eagle's Medium (DMEM) and Ham's F-12 Nutrient Mixture. This combination offers a balanced nutrient profile, making it suitable for a wide range of cell types, including those that require the specific nutrients provided by both DMEM and F-12. The medium is particularly well-suited for primary cell cultures and the growth of certain epithelial cells, providing an environment that supports robust and consistent cell growth.

Ordering Information

Contains	Cat. No.
	C1M004DF01
L-Glutamine	✓
Phenol Red	✓
Sodium Pyruvate	✓
HEPES	-
Sodium Bicarbonate	✓

RPMI-1640 is developed for the culture of human leukemic cells, lymphocytes, HeLa cells, hybridomas, and various carcinoma cells. RPMI-1640 is rich in phosphate, amino acids, and vitamins, utilizing a bicarbonate buffering system that requires a 5–10% CO2 atmosphere to maintain physiological pH. While it does not contain proteins or growth factors, it is typically supplemented with 10% fetal bovine serum, making it a flexible and adaptable medium for various cell culture applications.

Ordering Information

Contains	Cat.No.	
	C1M006RI01	C1M016RI01
L- Glutamine	✓	✓
Sodium Bicarbonate	-	-
L-Cystine Dihydrochloride	-	✓
L- Cystine	✓	-
L- Tyrosine Disodium Salt	-	✓
L- Tyrosine	✓	-
Phenol Red	-	-
HEPES	-	-

The formulation of **IPL-41** is optimized to support the unique metabolic requirements of insect cells, providing a reliable environment for both routine maintenance and more complex applications, such as virus production. Its consistent performance makes IPL-41 an essential tool in the field of long-term culture of baculovirus-infected cells.

Ordering Information

Cat. No.	C1M007IL02

C1-BCM has been specifically developed for BHK cell culture, precisely formulated to meet the unique nutritional and environmental needs of BHK cells, ensuring optimal growth, viability, and productivity. Our specialized medium includes a balanced mix of essential amino acids, vitamins, and trace elements tailored to support the robust proliferation of BHK cells. Whether you're working on vaccine production, recombinant protein expression, or other biotechnological applications, our BHK cell culture medium offers consistent performance, helping you achieve reliable and reproducible results every time.

Culture Media Engineering

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SERVICES

Customization:

At C1 Culture Media Engineering, we work hand-in-hand with our clients to develop customized media solutions tailored to their unique needs. Our production-focused approach is perfect for those with specific media compositions and precise outcome expectations.

Quality:

Our C1 Culture Media Engineering is equipped with Class C clean rooms, guaranteeing that all media are produced under the highest standards of cleanliness and control. We proudly hold GMP certification, a testament to our unwavering commitment to quality and regulatory compliance.