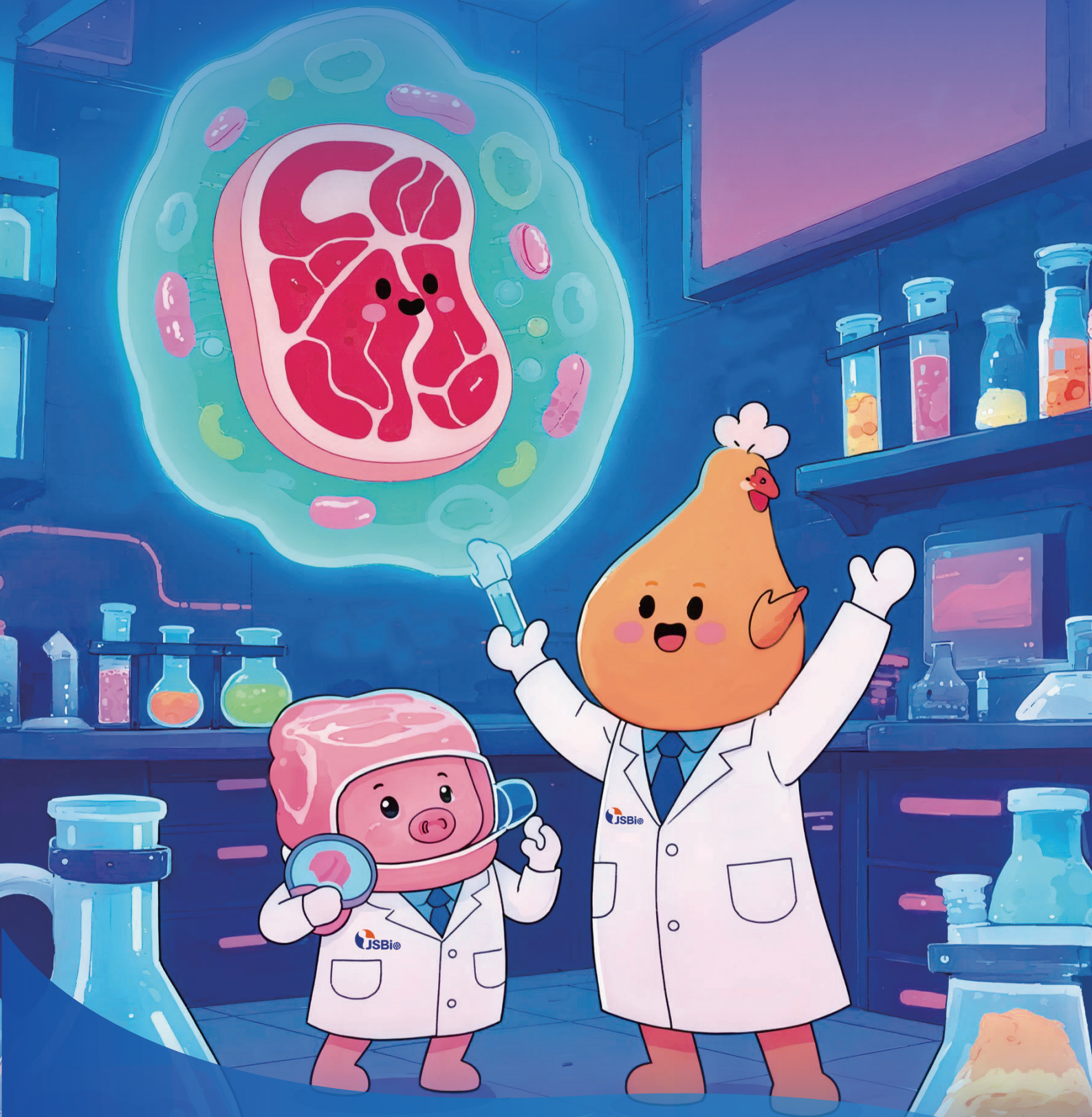




Media Product and Services to Power
the Future of Cellular Agriculture

At JSBio, we specialize in high-purity, food-grade amino acids, salts, vitamins and glucose—critical foundational ingredients for cultivated meat production, cell culture, and food biotech applications. All our raw materials adhere to strict global food safety standards, ensuring seamless compatibility with your production processes and regulatory requirements.

Global cultivated meat scaling faces hurdles in large-scale, cost-competitive production—from cell lines to bioprocess design.

JSBio addresses these hurdles with industry-leading dry powder manufacturing: scalable capacity, uncompromising food safety, and high-performance, cost-effective cell culture media.

Our Food-Grade Offerings

Amino Acids: A comprehensive range of essential and non-essential amino acids, including (but not limited to):
All designed to support cell growth, protein synthesis, and meat cell mass development.

Material ID	CAS	Molecular Weight
L-Alanine	56-41-7	89.09
L-Arginine Monohydrochloride	1119-34-2	210.66
L-Asparagine Monohydrate	5794-13-8	150.14
L-Aspartic Acid	56-84-8	133.10
L-Cysteine Hydrochloride Monohydrate	7048-04-6	175.63
L-Glutamic Acid	56-86-0	147.13
L-Glutamine	56-85-9	146.14
L-Histidine Monohydrochloride Monohydrate	5934-29-2	209.63
L-Isoleucine	73-32-5	131.17
L-Leucine	61-90-5	131.17
L-Lysine Monohydrochloride	657-27-2	182.65
L-Methionine	63-68-3	149.21
L-Phenylalanine	63-91-2	165.19
L-Proline	147-85-3	115.13
L-Serine	56-45-1	105.09
L-Threonine	72-19-5	119.12
L-Tryptophan	73-22-3	204.23
L-Valine	72-18-4	117.15

Inorganic Salts: Provide essential ions for metabolic processes and support cell viability and function.

Material ID	CAS	Molecular Weight
Calcium Chloride	10043-52-4	110.98
Calcium Chloride Dihydrate	10035-04-8	147.02
Ferric Nitrate Nonahydrate	7782-61-8	404.06
Magnesium Sulfate Heptahydrate	10034-99-8	246.52
Magnesium Sulfate	7487-88-9	120.38
Potassium Chloride	7447-40-7	74.55
Sodium Bicarbonate	144-55-8	84.01
Sodium Chloride	7647-14-5	58.44
Sodium Phosphate Monobasic	7558-80-7	119.98
Sodium Phosphate Monobasic Monohydrate	10049-21-5	137.99

Glucose: High-purity food-grade glucose, a key energy source for cell metabolism, ensuring consistent cell proliferation and culture efficiency.

Material ID	CAS	Molecular Weight
D-Glucose (Anhydrous)	50-99-7	180.16
D-Glucose (Monohydrate)	77938-63-7	198.18

Vitamin food-safe, cultivated meat grade.

Material ID	CAS	Molecular Weight
Biotin	58-85-5	244.31
Choline Chloride	67-48-1	139.63
Cyanocobalamin	68-19-9	1355.37
D-Calcium Pantothenate	137-08-6	476.54
Folic Acid	59-30-3	441.41
Myo-Inositol	87-89-8	180.16
Niacinamide	98-92-0	122.13
Pyridoxine Monohydrochloride	58-56-0	205.64
Riboflavin	83-88-5	376.40
Thiamine Hydrochloride	67-03-8	337.27

Technologies & Process Expertise

Technologies

- Adaptation to suspension culture
- Custom media development with food grade raw materials
- Micro-carrier process development
- High cell density culture process development (fed-batch and perfusion)

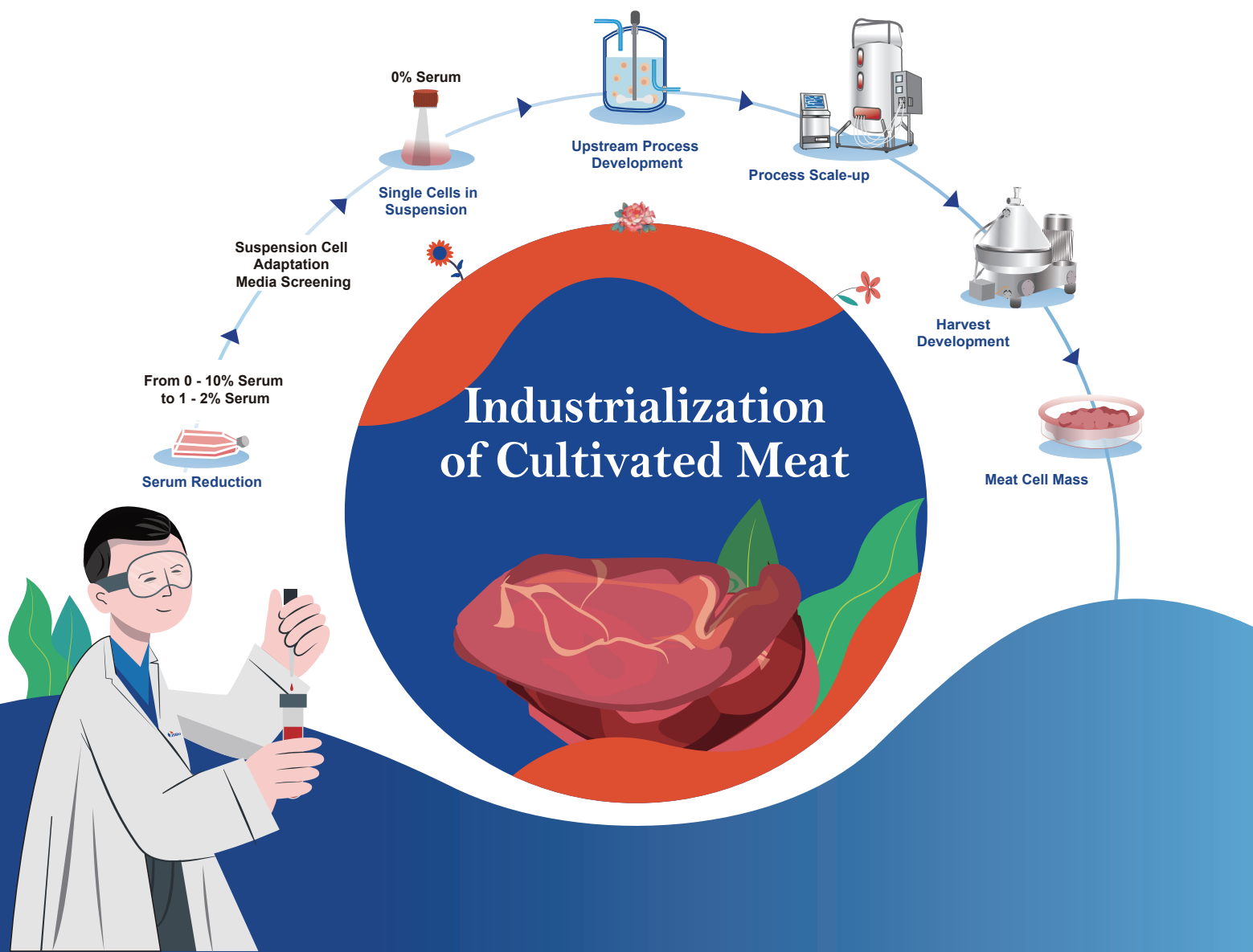
Analytics

- Spent media
- Impurities in raw materials and media products
- Nutrients in cell mass: total proteins, amino acids, vitamins, metals etc.

Media Manufacturing

	Rapid Small Scale	Commercial Scale
Capacity	<ul style="list-style-type: none">• Liquid: 1–200 L• Dry powder: 1–50 kg	Dry powder: 50–6000 kg
Lead Time	18 days	30–45 days
cGMP-Compliance	Yes	Yes
Raw Materials	<ul style="list-style-type: none">• Food & Cultivated Meat Grade raw materials• Customized raw material sourcing	
Manufacturing Technology	Continuous pin-milling for powder	
Release Testing	Heavy Metals, Microbial & Bioburden, and additional Standard/Custom Testing	
Packaging	Foil Bags, Drums (1–50 kg), Bulk Bags (100–1000 kg)	

Process Flow:



Full-Formulation Production Capacity: Covering All Stages

Formulation	Capacity	Key Technology	Lead Time
Liquid	1–200 L	B+A Automatic filling	18 days
Dry Powder	1 kg, 50 kg, 200 kg, 380 kg, 850 kg, 6000 kg	Continuous pin-milling	30–45 days

Customized Packaging Solutions

We offer flexible packaging to protect powder integrity and fit your storage/handling needs:

- Foil Bags (1–5 L)
- PP Buckets, Bulk Bags (1–500 kg)
- Custom options include LOGO printing, and multilingual labels

Strict Quality Control

- **Raw Material Inspection:** Each batch of raw materials undergoes strict testing to ensure that indicators such as heavy metals (lead, arsenic, etc. < 0.1 mg/kg) and microorganisms (total bacterial count < 10 CFU/g) meet the standards.
- **Production Environment:** The production workshop meets cleanliness standards equipped with an efficient air filtration system and strict disinfection procedures to prevent cross - contamination.
- **Finished Product Testing:** Each batch of products undergoes comprehensive testing, including indicators such as purity (≥ 99.5%), solubility, and endotoxin (< 0.1 EU/g), and a detailed COA (Certificate of Analysis) is provided.



Authoritative Certifications for Global Markets



Food Safety Certification

FSSC 22000 / ISO 22000



Halal Certification

Internationally Recognized Halal Bodies



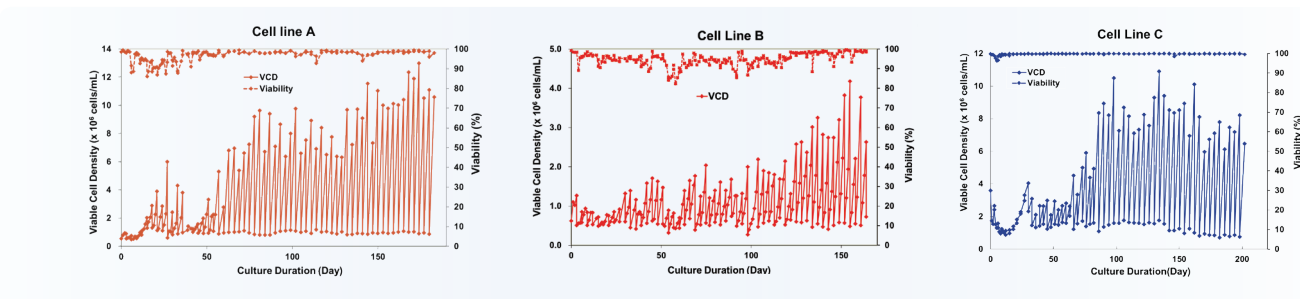
Other Compliance Certifications

FDA GRAS / EU EC 178/2002
Meets US, EU food-grade standards for safe use in cell culture and food fields.

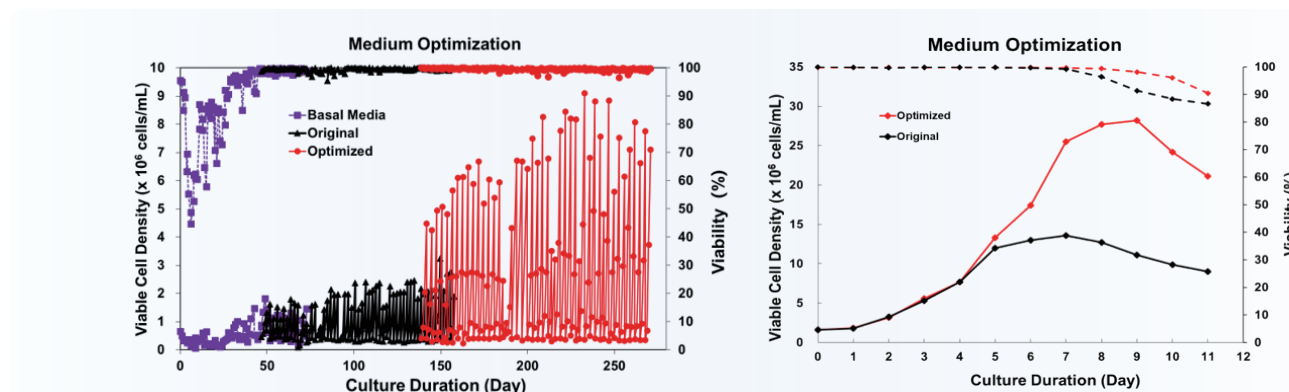
Case Studies

JSBio has extensive experience in adaptation of adherent cells to suspension culture. Many types of cell lines (such as insect cells, MDCK cells, ST cells and other cell types, see examples below) have been adapted for the manufacturing of cultivated meats, monoclonal antibodies, and human and animal vaccines.

The lab results shown in the chart below demonstrate that our media effectively supports both the proliferation (reflected by VCD) and survival (reflected by viability) of diverse cell lines across prolonged culture periods, highlighting its reliability for a range of biomanufacturing scenarios.

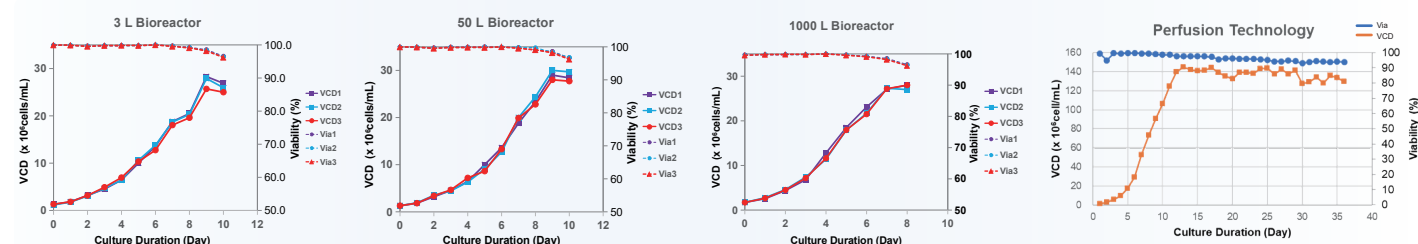


JSBio has specialized in custom media development. Based on an extensive experience in medium development for biopharmaceutical companies, we have developed a large number of media for various cultivated meat processes. Examples are shown below:



JSBio has developed cultivated meat processes using fed-batch processes and perfusion technologies. In the fed-batch process, JSBio has developed scalable process, from 3 L to 1000 L.

JSBio has successfully developed cultivated meat production processes incorporating both fed-batch and perfusion technologies. Our fed-batch manufacturing processes demonstrate robust scalability, having been validated across bioreactors from 3 L lab-scale unit up to 1000 L industrial-scale production units (see Figures below). These processes consistently achieved high VCD with excellent lot-to-lot reproducibility, confirming their technical viability and scalability potential.



Why Choose JSBio?

- Food Safe & Cultivated Meat Grade:**
 Rigorously sourced to meet global food safety regulations; certified to ISO 9001, ISO 13485, ISO 14001, ISO 45001, FSSC 22000 and HALAL standards.
- Customized Solutions:**
 Tailored to your purity, particle size or packaging needs; Custom raw material sourcing available.
- Serum-Free Advantages for Cultivated Meat:** Animal-component-free, ensuring safety, consistency and regulatory compliance.
- Regulatory Support:**
 Batch-specific Certificates of Analysis (COA); audit assistance.
- Quality Guaranteed:**
 Supported by strict release testing—including pH value, osmolality, endotoxin, heavy metals and microbial contamination—to ensure safety and performance.



JS Biosciences Co., Ltd.



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