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BioVita G

Highly Flexible Bioreactor for Research and Development

Optimizing Progress with Flexibility

Company Overview

BioMatrix is a leading provider of innovative fermentation solutions, with a focus on efficiency, precision, and flexibility. With years of expertise in biotechnology and a commitment to sustainable production, we deliver cutting-edge systems that adapt to the diverse needs of industries such as pharmaceuticals, food & beverage, and environmental engineering.

Technical Expertise
Our state-of-the-art fermentation tanks are engineered for optimal performance, offering advanced features like precise temperature control, real-time monitoring, and energy-efficient operation. We prioritize flexibility in design, allowing for tailored solutions that meet unique production requirements. Our team of skilled engineers and scientists is dedicated to delivering customized solutions that drive production success.

Industry Experience
With over a decade of experience in the biotech sector, we have successfully partnered with clients globally, helping them streamline their processes and achieve superior fermentation results. Our solutions are trusted by top-tier companies for their reliability, scalability, and flexible approach to meeting diverse production needs.

BioVita G: The Ultimate Universal Controller offers Full Flexibiliy

Flexible Configurations

"BioVita G controllers are advanced systems designed to monitor and precisely control critical fermentation parameters, including: Temperature Control/ pH Regulation/Dissolved Oxygen Management/ Agitation Control/Automated Feeding Systems"

Smart Control System
-PLC Control: Stable, reliable, and automated operation.
-Touchscreen Interface: User-friendly with real-time monitoring.
-Upper Computer Connection: Supports remote management and data upload.

Humanized Design
-Color-Coded Cables: Easy distinction between power and data cables.
-Hidden Connectors: Prevent accidental touches.
-Waterproof Connectors & Front USB: Durable and accessible for data transfer.

Modular Gas Supply
-Supports up to 4 gases (air, N2, O2, CO2)
-Flexible combination options and easy upgrades

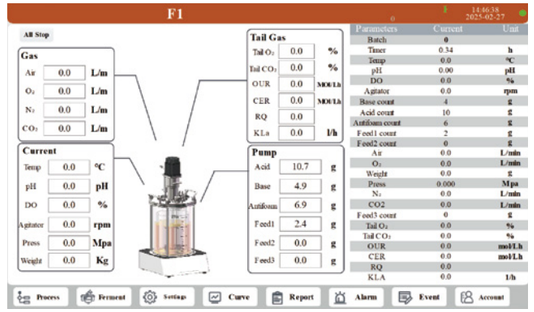
High-performance Pumps
-Flexible Configuration: Up to 4 pumps for various fluid needs (acids, bases, anti-foaming agent and feed)
-Fixed-Speed Pump: Stable, for consistent flow.
-Variable Speed Pump (Optional): Adjustable flow for different fermentation conditions.

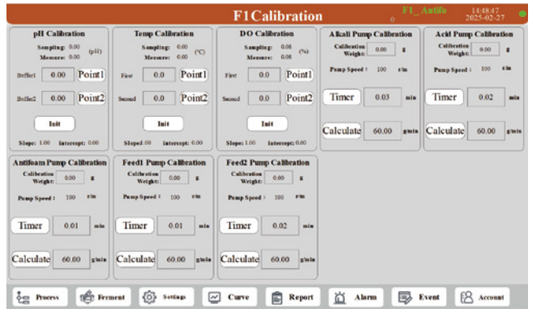
Vessels
-Working volumes from 0.3 to 10 L
-Up to 14 ports for sensors (anti-foaming agent, pH, pO2, redox, etc.)
-Customizable with various stirrers and spargers

BioVita G- Control System

With independent design and proprietary intellectual property rights, our system delivers precise theoretical foundations to advance fermentation research.

Control parameters: temperature, stirring , PH, DO, feed, defoaming and other parameters for detection, recording, control setting; pH and DO sensors can be easily calibrated through software.





Temperature Control

Ensures optimal fermentation conditions by precisely regulating temperature.

pH Control

Maintains ideal pH levels for efficient enzyme activity and microbial growth.

pH

Dissolved Oxygen (DO) Control

Monitors and adjusts oxygen levels to optimize aerobic fermentation.

Gas Flow Control

Regulates gas supply to improve fermentation efficiency.

Stirring Speed Control

Adjusts stirring speed for uniform mixing and efficient oxygen transfer.

DO

Data Logging and Monitoring

Tracks key parameters for process transparency and quality control.

Automation and Intelligent Control

Automatically adjusts settings based on real-time data for consistency and efficiency.

BioVessel G

Our BioVessel is the ideal benchtop bioreactor for your lab.

The multi-talented control cabinet opens up a new world of flexibility for your changing requirements. It can be used in single, twin, or multiple configurations, making it suitable for a wide range of applications.

Choose from our selection of conventional stirred-tank glass vessels, with a maximum working volume range from 1L to 10L. This flexibility ensures you have the perfect setup for your cultivation needs, whether for microbial or cell culture experiments.

Our reliable autoclavable borosilicate glass culture vessels are available in multi versatile volumes ranging from 1L to 10L, catering to a wide variety of cell culture and microbial applications.

How your benefit

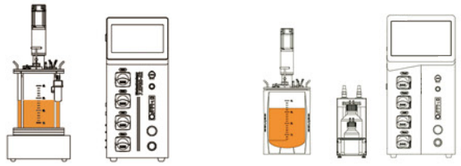
The classic stirred-tank design ensures ease and reliability for seamless scale-up and scale-down studies.

Optimize your resources with the specal designed vessels, ideal for use in general lab autoclaves, reducing the need for additional investment.

Flexible Configurations

BioVita G controllers are advanced systems designed to monitor and precisely control critical fermentation parameters, including: Temperature Control/ pH Regulation/Dissolved Oxygen Management/ Agitation Control/Automated Feeding Systems

Technical Specifications



Multi-style			Microbial bioreactor	Double-wall bioreactor
Glass type vessel	Total volume (L)		1-10	1-10
	Working volume (L)		30%-70%	30%-70%
	Vessel quantity		1	1
	Sterilization		Off-site sterilization (in Autoclave)	
Heating method	Stainless steel bottom jacket heating		●	-
	Doubel-wall glass jecketed heating		-	●
	Electric blanket heating		-	-
Gas supply system	Gassing	Standard	Air	Air
		Optional (O2/N2/CO2/CH4)	◎	◎
	Gas flow control	Roto flowmeter (manual control)	●	●
		Mass flowmeter (automatic control)	◎	◎
	Air intake way		Bottom O-Ring Sparger	
Stirring system	Machanical stirring		Standard for bacterial culture	
	Speed (RPM)		0-1000 rpm ±1rpm	
	Magnetic stirring		Standard for cell culture	
	Speed (RPM)		0-300 rpm ±1rpm	
Feed supplement system	Peristaltic pumps		Standard with 4 high-precision peristaltic pumps	
			Optional: 6 or 8 pcs	
Detection electrode	Sensor	Temperature	●	●
		pH	●	●
		DO	●	●
		Antifoam	●	●
		CO2	◎	◎
		OD	◎	◎
		Other	◎	◎
Touchscreen controller		Kunlun	●	●
		Siemens	◎	◎
Remote control system			◎	◎

● Standard ◎ Optional

Technical Specifications

Multi-style			Benchtop duplex bioreactor	Multi-Channel mini parallel bioreactor	Multiple bioreactor
Glass type vessel	Total volume (L)		1-10	0.1-2.5	1-10
	Working volume (L)		30%-70%	30%-70%	30%-70%
	Vessel quantity		2	2/4/6/8/12	2/4/6/8/12
	Sterilization		Off-site sterilization (in Autoclave)		
Heating method	Stainless steel bottom jacket heating		●	●	●
	Doubel-wall glass jecketed heating		-	-	-
	Electric blanket heating		●	-	◎
Gas supply system	Gassing	Standard	Air	Air	Air
		Optional (O2/N2/CO2/CH4)	◎	◎	◎
	Gas flow control	Roto flowmeter (manual control)	●	●	●
		Mass flowmeter (automatic control)	◎	◎	◎
	Air intake way		Bottom O-Ring Sparger		
Stirring system	Machanical stirring		Standard for bacterial culture		
	Speed (RPM)		0-1000 rpm ±1rpm		
	Magnetic stirring		Standard for cell culture		
	Speed (RPM)		0-300 rpm ±1rpm		
Feed supplement system	Peristaltic pumps		Standard with 4 high-precision peristaltic pumps		
			Optional: 6 or 8 pcs		
Detection electrode	Sensor	Temperature	●	●	●
		pH	●	●	●
		DO	●	●	●
		Antifoam	●	●	●
		CO2	◎	◎	◎
		OD	◎	◎	◎
		Other	◎	◎	◎
Touchscreen controller		Kunlun	●	●	●
		Siemens	◎	◎	◎
Remote control system			◎	◎	◎

● Standard ◎ Optional