



# Biobrain® Supervise

The Standard in Bioprocess  
Data Management  
and Automation

Simplifying Progress

SARTORIUS

# Developed for the Process — Designed for You!

Biobrain® Supervise enables you to incorporate a new standard in bioprocess data management and automation. Its reliable data acquisition, efficient trend monitoring, and advanced recipe control make it an ideal tool for all upstream and downstream processes, no matter if you prefer single-use or reusable systems.

Biobrain® Supervise is the new name for our proven BioPAT® MFCS SCADA software, which is based on our experience in bioprocess control since 1986.



reddot award 2019  
winner

**Focus on Essential:** Get the right focus for a fast and clear operation with our award-winning UI.

**Quick Overview:** Support of up to 32 process units and get all relevant information at a glance.

**Connectivity:** Integrate PAT sensors and analyzers as well as third-party instruments via OPC for enhanced process knowledge and control.

**Process Safety:** Let the alarm management system take care of process limits.

**Advanced Charting:** Display real-time monitoring of 72 process values and benefit from batch analysis.

**Calculation Capabilities:** Calculate important bioprocess parameters and non-direct measurable variables with the calculation module.

**Full Process Control:** ANSI-88-compliant batch control for robust process automation

**Data Integrity and Security:** High-quality data collection for on- and offline process data, in a fast, powerful, and searchable SQL-database.

**Compliance:** Technical features ensure compliance with common regulations like 21 CFR Part 11 or EU Annex 11.

# Compliant and Reliable Operation

Biobrain® Supervise gives you audit-safety. Its functionality to support GMP, EU Annex 11 and 21 CFR Part 11 regulations brings the highest degree of data integrity and data security from research to production scale.

## Traceability

The comprehensive automatically generated audit trail records all system changes and batch-related activities.

## Data Integrity and Security

Data integrity & security of your data over the whole retention period is ensured by a Microsoft SQL database.

## Electronic Record Management

Benefit from using compliant digital batch records and electronic signatures to streamline documentation and review processes.

## Access Control

The advanced role-based user management system, capable of integration with LDAP, allows controlled access based on your organizational rules.



## Unlock the Power of Lean Data Historization for Ambr®

Elevate your Ambr® Multi Parallel Bioreactor Systems with Biobrain® Supervise, as the solution for data historization. Seamlessly compare your process data with bioprocess data from other bioreactor scales within Supervise, enhancing data integrity and traceability.

Experience unparalleled efficiency and precision in managing your bioprocess data, ensuring robust and reliable insights for your operations.

## Confident Service

Sartorius support with planning and implementation during all phases of the installation and validation. From assistance with writing the functional design specification over the installation and configuration up to the execution of FAT/SAT.

As your Biobrain® Supervise SCADA system is a critical component for your bioprocess, it is important to have confidence that your software is up-to-date and properly supported. Our Service and Support Agreements providing regular product updates and dedicated expert support.





# Turn Advanced Process Strategies into Reality

## Recipe Automation

- Intuitive, graphically guided configuration
- Drag-and-drop operations and phases
- Sequential, parallel, and repeated execution of phases
- State and time-dependent transitions
- Pre-defined phase types for set-points, feeding profiles, or timers
- Formula management for easy adoption of (master) recipes before execution

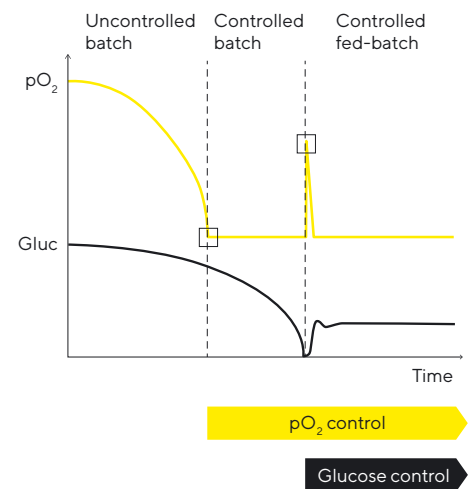
## Benefits

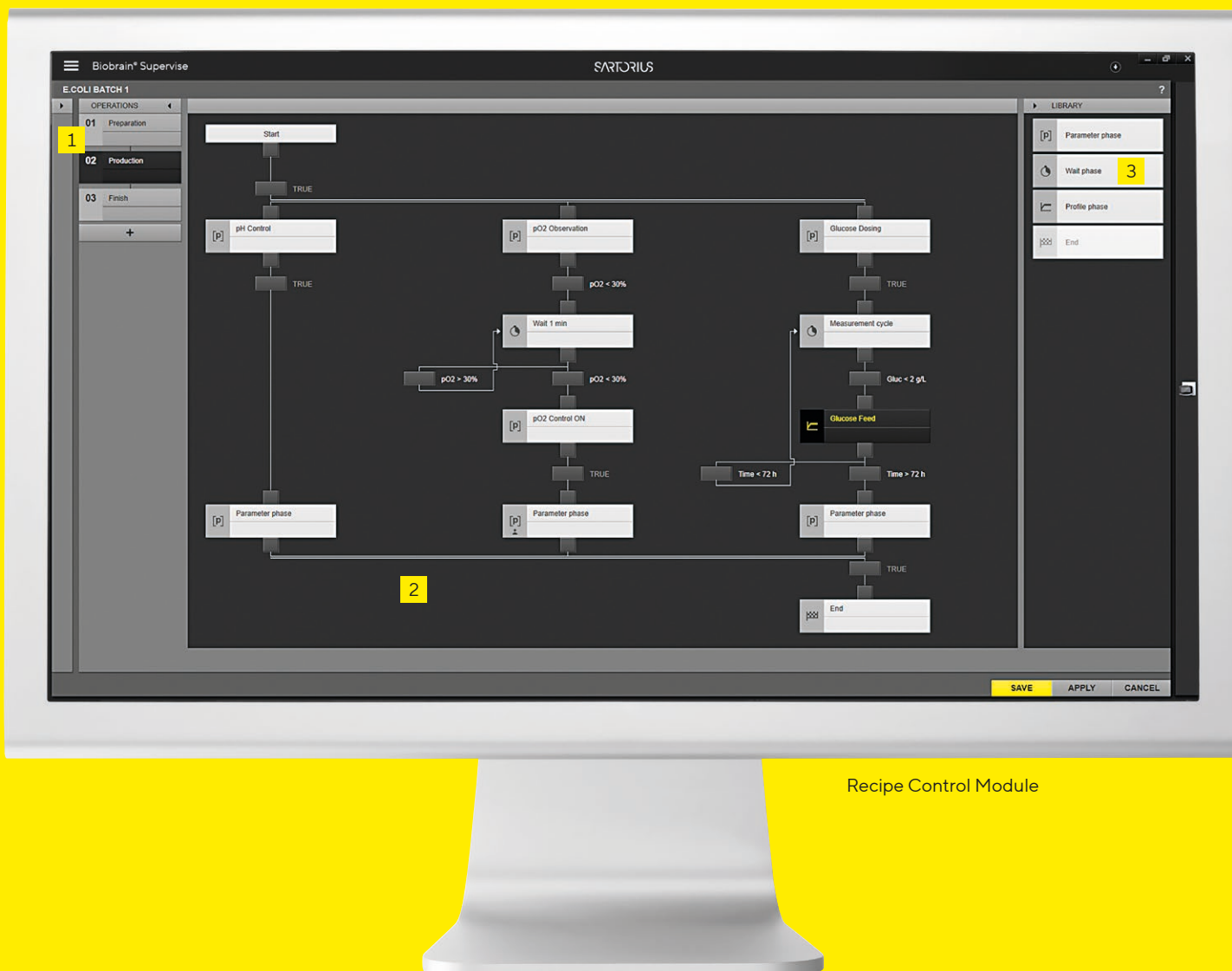
- Improved batch-to-batch consistency
- Decreased risk of errors
- Minimized number of rejected lots
- Automated processing to free up operator time
- ANSI-88-compliant, standardized automation

## Application Example

- Event-based activation of control loops
- Automatic batch end detection, e.g., based on  $pO_2$  | off gas measurements
- Implement advanced feeding strategies for fed-batch processes
- Control complex perfusion processes with predefined perfusion recipes

### Automatically Switch Between Process Phases





Recipe Control Module

### 1: Easy Configuration

Get started immediately, and implement your process strategies.

### 2: Intuitive Use

Clear workflows for maximum productivity.

### 3: Quick Access

Pre-defined functions are right where you need them.

## Extend the Possibilities of Biobrain® Supervise



**Recipe Control Module**  
ANSI-88-compliant batch control for robust process automation



**OPC Server Module**  
Connect Biobrain® Supervise process data and alarms to your historian or MES systems



**User Management**  
Centralized user management with domain connectivity and flexible permission rights configurations



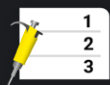
**OPC UA Client Module**  
Connect to Biobrain® and additional equipment, e.g., BioPAT® Trace, BioPAT® Xgas



**Calculation Module**  
Create soft sensors to monitor non-directly-measurable quantities, e.g., OUR, RQ



**Multi User Option**  
Monitor and control your process from up to 30 clients simultaneously (RDP supported)



**Sample Data Module**  
Integrate and manage off-line sample data



**21 CFR Part 11 Module**  
Capabilities to ensure compliance with 21 CFR Part 11 or EU Annex 11 regulations

# Engineering Recipe Services For Biobrain® Supervise

Creating recipes can be a time-consuming and tedious task, especially when complex automation strategies must be implemented. Leverage the experience of the Sartorius engineers, which can create customized recipes based on your requirements:

The Biobrain® Customize Recipe Service includes the creation of a recipe template which is easy to import, comprehensive documentation and optional available qualification services.

The Perfusion Recipe Service provides a ready-to-use recipe template for perfusion and concentrated fed-batch cell cultivation guided by on-screen instructions for Biostat STR® 50 L, and Biostat® B-DCU 2 L, 5 L or 10 L.

## Interface Consulting (IC)

Based on standard system capabilities, the Interface Consulting Service decreases the effort and the risk to integrate Biobrain® Supervise into manufacturing IT answering the customer need for support for system integration.


## Advanced Order Execution (AOE)

Advanced Order Execution provide a dedicated project coordinator (remotely) for order of Biobrain® Supervise including scheduling and monitoring of order progress, order related questions and early access to all available documentation.



# Learn More About Biobrain® Supervise

Learn more about Biobrain® Supervise by downloading the demo version. Stay up to date about the latest product and security updates by visiting the Biobrain® Supervise website for more information.

 Visit the Biobrain® Supervise website:  
[sartorius.com/biobrain-supervise](http://sartorius.com/biobrain-supervise)



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