

Bioprocess control made easy

Learning to use a bioprocess controller is a complex endeavour for beginners, and even specialists need a while to adjust to new equipment. **Eppendorf** explains how its BioFlo 120 reduces training time, enabling scientists to spend more time on vital research.

Work in a bioprocess lab is ever changing. Experimental set-ups develop, other producer platforms are tested and new users have to be trained. Responding to changing needs becomes much easier with a user-friendly and flexible bioprocess controller.

With the Eppendorf BioFlo 120 you can grow any cell type you can think of – microbial, insect, fungal, mammalian or stem cells – on a single platform. It can be employed for batch, fed-batch and continuous cultures.

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Auto Culture modes get you started

In bioprocessing, environmental parameters like temperature, pH and dissolved oxygen (DO) have to be monitored and controlled. The less experienced user might seek guidance on, say, choosing setpoints, or setting up control loops to maintain the correct process values.

Setting up a bioprocess can become very complex: the user has to take into account which organism he is going to cultivate, in what kind of vessel, with how many impellers, and so on. This is where Eppendorf's Auto Culture modes come in.

The control software is equipped with tried-and-tested setpoints and control loops for different applications and vessel types. With the Auto Culture modes of the BioFlo 120 bioprocess control station, the user can select either a predefined *E coli* batch fermentation protocol, or a CHO batch cell culture process that begins at the push of a button. The modes are populated with setpoints and cascades recommended by the applications development team, backed by the expertise developed over hundreds of experiments.

Platforms for success

Auto Culture modes enable users to achieve quick and easy initial culture success, while experiencing a minimal learning curve. Every setpoint and mode of operation can be adjusted, optimised and saved as user-defined recipes, which are collected into a library for future use.

The modes are integrated into the embedded bioprocess control software, which offers real-time local process control through an integrated touchscreen. For additional process

control capabilities and secure database management, the BioFlo 120 can also be connected to Eppendorf SCADA platforms DASware and BioCommand.

Packed with features

Today you perform initial tests in a small working volume, but tomorrow you might want to scale up your bioprocess to obtain more of the desired product.

The BioFlo 120 makes this possible. It is equipped for use with BioBLU single-use vessels, as well as industry-standard glass autoclavable bioreactors and fermentors. Together, the vessels cover a working volume range of 250ml to 40L.

With the option of mass-flow-controlled gassing and automatic mixing of up to four gasses, the control station is well equipped for DO control in a variety of applications. Universal connections for digital Mettler Toledo ISM and analogue sensors make it easy to monitor a variety of critical process parameters.

No matter if you are in an academic, governmental or industrial research setting, the BioFlo 120 fermentor/bioreactor provides what you need today, and for what you may encounter in the future. ■



The BioFlo 120 bioprocess control station.

Further information

Eppendorf
www.eppendorf.com

