

Iris 6 for Bioreactors

Parallel Bioprocess Control Software



- ▶ Full data logging
- ▶ Time- or event-based control
- ▶ Individual control loops
- ▶ Graphical display of process data
- ▶ Comprehensive reports
- ▶ FDA 21 CFR Part 11 compliant

« Through Iris we are able to implement multi-level cascades, taking fermentation to the next dimension. »

Mohd Razif Mamat, Research Officer Protein Expression and Purification, Malaysia Genome Institute



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May be subject to technical amendments

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Iris 6 – Modern, Flexible SCADA

▶ Full data logging

Data can be logged at user-selectable time intervals and new process parameters easily added. The full data logging includes data from your bioreactors and all connected external laboratory equipment such as sensors, balances, mass spectrometers, etc. Offline analysis data can be added manually to the system.

▶ Reliable process control

Parameters can be altered according to time, events or any combination of the two. More sophisticated control options can be provided by sequence scripts, which allow events and calculated parameters to play a part in control (see box).

▶ Data analysis

All archived data can be evaluated using graphical comparison and correlation. Process data is displayed in text and graphical formats and graphs can be annotated with text. Comprehensive alarm options allow for full monitoring and indication of process variables even slightly out of range.

▶ Data export

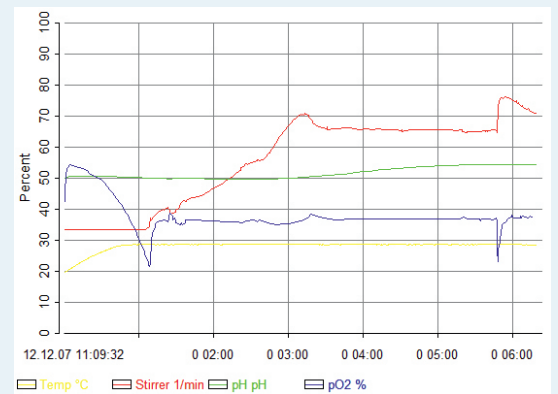
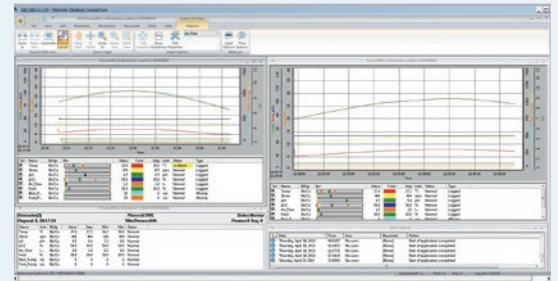
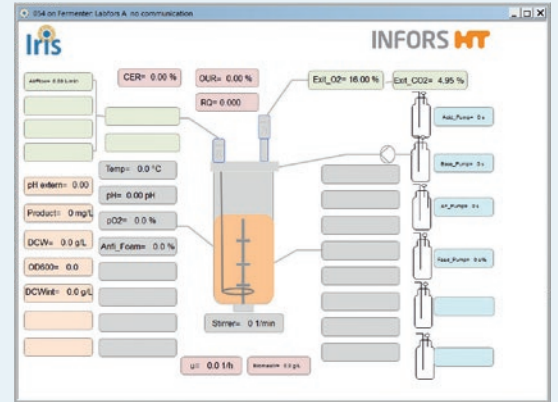
An enhanced reporter module makes creation of batch tickets, data export and printing both comprehensive and simple. If required, details of the parameter settings, control sequence, alarms and batch ticket can be included along with the basic process values.

▶ Easy to use

As Iris is fully Windows compliant, it is already familiar to users of other applications. Comprehensive help and the use of wizards combined with many examples provided in the hard-copy operating manual make for a short learning curve and optimum productivity.

▶ FDA compliant

Features such as a user action log provide the required information for compliance and validation of processes with current regulatory approval of processes. Iris is FDA 21 CFR Part 11 compliant, with a proven track record in validated processes.



Sequence Application Scripts

- Calculation of respiratory quotient (RQ)
- Use of RQ for substrate feed control
- Start feed based on pO_2
- Exponential feeding
- Periodic addition of antifoam
- Cascade control of pO_2
- Balance-controlled feeding
- And more

Data Logging

- 1–8 bioreactors
- Analytical and calculated process data
- Online data from external equipment
- Integration of offline analysis data
- Inputs from external software

Control

- Time- or event-based control
- Feedback control using sequences
- Calculated process parameters
- Individual control loops
- Protocols
- Follow file function

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