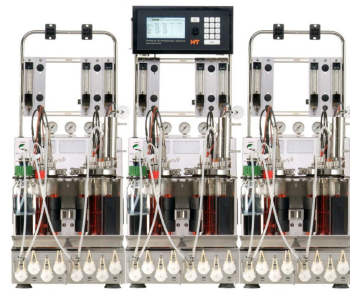


Iris V5

Multi-Bioreactor Software



Iris V5

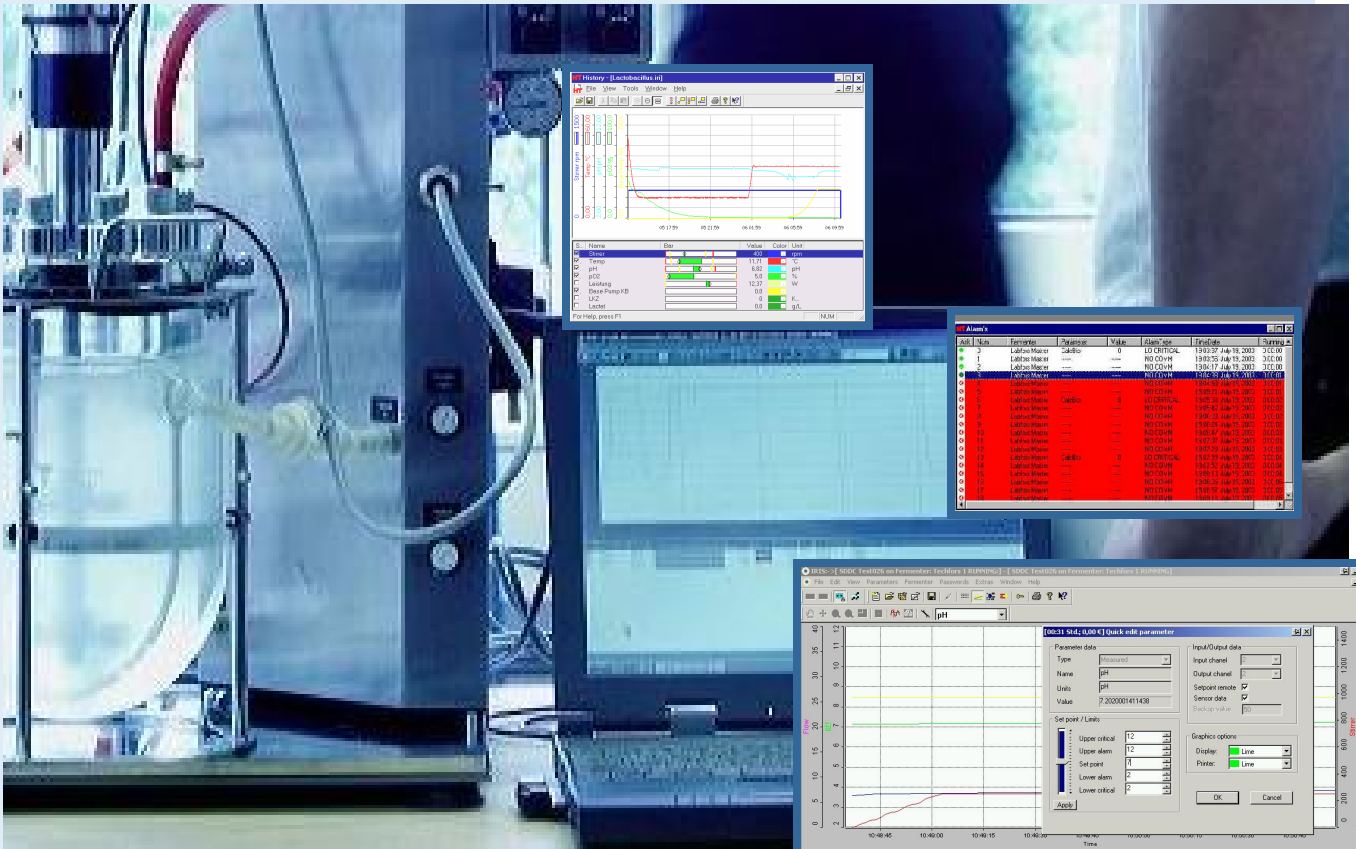
Process Control and Analysis

Iris V5

Iris V5 is 32-software for data-logging, analysis archiving and control of bioreactors. Iris can operate on a single PC, network, remote control and network/modem. Peripherals such as balances, external pumps, or analysers for exit gas measurement, biosensors, mass spectrometers etc. can be connected online to the system. Through integration of this type of data and off-line analysis information, Iris is the centre for a true

„BIOLOGICAL PROCESS CONTROL“.

Mouse-click through Menu



Operation of bioreactors via a PC

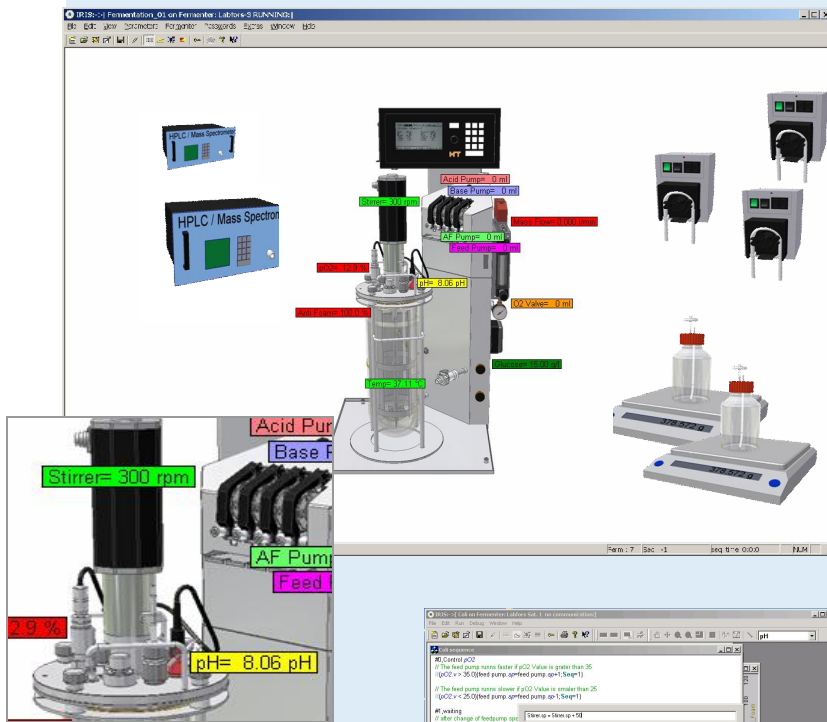
While preparations for a fermentation setup such as switching parameters on and off and calibrations are made from the operating panel of the bioreactor, control of the running bioreactor in terms of data input, supervisory set-point control etc is via Iris and the PC.

Consequently, the operational advantages of a large display with keyboard and mouse can be fully realized.

Iris V5

Advantages

- Flexible – suitable for both research and production
- Links to bioreactors with different configurations – from Mini- to Production bioreactors
- Simulation of fermentations possible
- Fully Windows compliant
- Iris is a 100% INFORS development



System Graphic display

Control scripting using sequences

Also, without specialist knowledge of programming, the user can develop simple yet efficient control scripts to meet their needs for specific parameter control.

- No complicated programming, thanks to simple commands and auto-completion of function statements
- The system automatically and continuously monitors operations for special events pre-set to trigger changes in the control strategy
- Simple editing using copy/paste

```
#0,02 Regelung über Substrat Feeding
if(pO2.v > 35.0) {feed pump.sp=feed pump.sp+1;Seq=1} // The feed pump runs faster if pO2 Value is grater than 35

if(pO2.v < 25.0) {feed pump.sp=feed pump.sp-1;Seq=1} // The feed pump runs slower if pO2 Value is smaler than 25

#1,Wartephase
// after change of feedpump speed we wait 120s before we change pump again. This avoids swinging. Please adapt this time
if(seq_time > 120){seq=0}
```

Data logging

- 1 – 8 Bioreactor
- Online-Data from sensors
- Offline-analysis data
- Data from external peripherals
- Online display of all Data as text, line or bar graphs.
- Two-stage asymmetrical alarms
- Storage and display of all alarm reports
- No data loss for the sake of smaller file sizes with data logging by time and by difference

Control

- „Supervisory Setpoint Remote Control“
- Time-based Profiling
- Event-based Profiling
- Calculated Parameters (eg. RO)
- Control of bioreactors over a network
- „Follow File“ > „Cloning“ of fermentations
- Data exchange between bioreactors possible

Process

Iris can control all parts of a larger process system, including control of external peripherals, eg. pumps. New parameters can be integrated with a bioreactor which is already running.

Analysis

All archived data within Iris can be evaluated using graphical comparison and correlation. Data can be exported in ASCII format to other application (eg. Excel, Origin etc) for further analysis.

Graphical display

- Online Graph
- History Graph
- Bar Graph
- Comparison and Correlation Graphs
- Time-Line Function
- Options for time, value and text message marking

Reports

- Parameter data can be exported
- If required, only part of the data can be included
- If required, details of the bioreactor protocol can be included
- If required, alarm reports can be included



Die INFORS HT ist ein internationales Team mit Niederlassungen in Europa und USA

Innovative thinking, quality and an understanding of the needs of our partners has secured INFORS HT an unrivalled place amongst manufacturers of bioreactor and shaker equipment. An enthusiasm for experiment and a creative mind has guided the company from its establishment in 1965 through its development into a medium-sized enterprise. Independence, a distinctive character and a strong team spirit will continue to serve us well in the future.

The head office on Infors AG is in Bottmingen

Quality Standards



- ISO 9001
- CE
- EMV

For Process Documentation to cGMP

- Documentation
- IQ
- OQ

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