



# Iris 6 for Shakers

Bioprocess control comes to incubator shakers!



- ▶ Easy to use
- ▶ Simple time-based control
- ▶ On- and offline data analysis
- ▶ Recipes and protocols
- ▶ Comprehensive data reports
- ▶ FDA 21 CFR Part 11 compliant



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May be subject to technical amendments

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# Data Analysis & Time-based Control

## ► Easy to use

Iris for shakers is Windows based software which allows incremental logging and control for up to 15 shaker decks of Multitron incubation shakers. As Iris is fully Windows compliant, it is already familiar. Comprehensive help and the use of wizards combined with examples provided in the operating manual and application scripts make for a short learning curve and optimum productivity.

## ► On- and offline data analysis

Data can be logged at user-selectable time intervals for temperature, shaker speed, humidity, CO<sub>2</sub>, lights On/Off and door open parameters. Offline and calculated data can be added to this data and directly exported in various formats, included XLS and PDF. Comprehensive alarm options allow for full monitoring and indication of process variables even slightly out of range.

## ► Simple time-based control

Simple time-based control can be set up in the Follow File Generator to provide ramps, steps and one-time changes from one set of operating conditions to another. More sophisticated control options can be provided by sequence scripts, which allow events and calculated parameters to play a part in control.

## ► Recipes and protocols

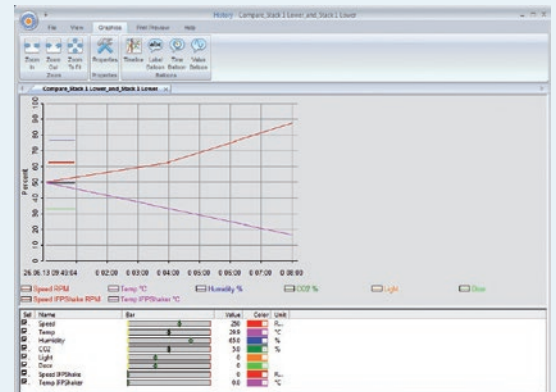
Compare different experiments and use the best as recipes or as automated follow files. Recipes can be defined and stored for future use.

## ► Comprehensive data reports

The reporter module makes 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.

## ► FDA 21 CFR Part 11 compliant

Features such as a user action log provide the required information for compliance and validation of processes with current regulatory approval of processes such as the FDA 21 CFR Part 11.



Bioreactor[0]		Phase:ACTIVE		Status:Normal			
Elapsed: 0, 00:01:50		Title:Process042		Params:6 Seq.-1			
Name	Unit	BkUp	Value	Setp	Min	Max	Status
Speed	---	Bk/Co	25	0	25	25	Normal
Temp	°C	Bk/Co	28.0	0.0	28.0	28.0	Normal
Humidity	%	Sd/Co	0.0	0.0	0.0	100.0	Inactive
CO <sub>2</sub>	%	Sd/Co	0.0	0.0	0.0	100.0	Inactive
Light	%	Sd/Co	0	0	0	100	Inactive
Door		Sd/Val	0	0	0	100	Inactive

### Data logging

- 1–15 shaker decks
- Online data from sensors in the shakers
  - Temperature
  - Speed
  - CO<sub>2</sub>
  - Humidity
  - Lights On/Off
  - Door open
- Offline-analysis data
  - Optical density
  - Dry cell weight
  - Biochemical analysis
- Two-stage asymmetrical alarms
- Storage and display of all alarm reports

### Graphical display

- Online graph
- History graph
- Comparison
- Time-line function in history
- Options for annotating graphs