

Lucullus Process Information Management System

Turning Data into Information

Lucullus PIMS software allows the user to monitor and control bioprocesses and offers an extensive toolbox for analyzing process data cross platforms. Process information can be generated based on data generated in different brands of bioreactor types and wide range of different cultivation volumes.

Lucullus PIMS is designed for research and process development applications. The program can be used for small scale production as well.

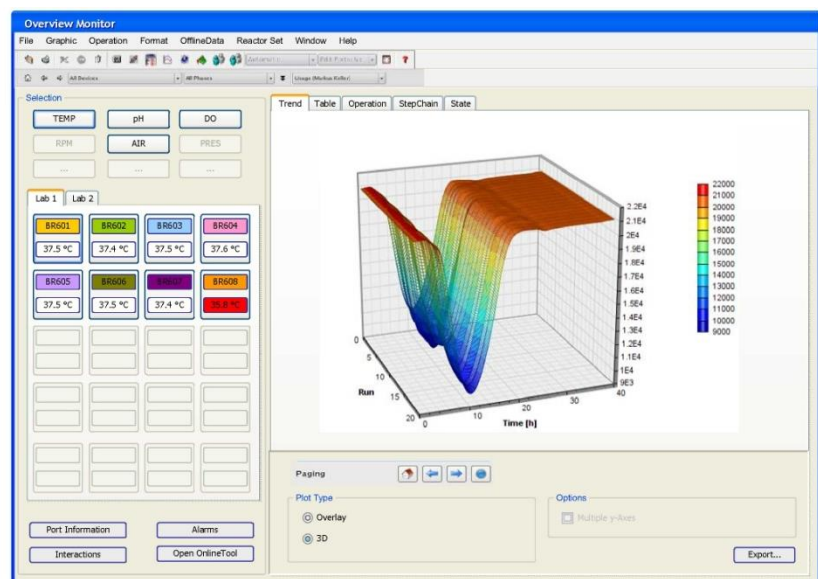
Among the many proven applications are long term mammalian cell cultivations, large number of short term microbial cultures and many others. The Oracle database that is used to store the data guarantees save and fast storage and retrieval of valuable process data.

The software includes functionality for :

- Design of Experiments
- Reactor Planning
- Media Preparation and Tracking
- Parallel Processing
- SCADA
- Data Mining
- Batch Reporting

The combination of the software with the broad range of Applikon Bioreactor Systems offer the user a unique system for fast track development and basic research.

The ever increasing amount of process data generated by more sensors in smaller parallel bioreactor systems needs advanced software to turn this data into useful information.



Lucullus PIMS offers a new dimension in data processing.

Data management and data analysis is key for the future of R&D and process development in pharmaceutical industry.

Specifications

Specifications	Lucullus Lite	Lucullus Standard	Lucullus Advanced	Lucullus Expert
GENERAL				
Operating system	Linux, Windows	Linux, Windows	Linux, Windows	Linux, Windows
Communication drivers include:	my-Control, in-Control, ez-Control, i-Control, SUB-Control			
Optional drivers	None	Sartorius controllers, NBS controllers, Infors Controllers, Siemens PLC, TAP AMBR, Shaker/Incubators, Analytical devices		
Design of Experiments	no	no	yes	yes
Media preparation planning	no	no	yes	yes
Analysis planning	no	no	no	yes
Resource planning (reactors)	no	no	yes	yes
Material Management	no	no	no	yes
Lot preparation	no	no	no	yes
Filling	no	no	no	yes
Storage management	no	no	no	yes
Data Acquisition	yes	yes	yes	yes
Process Control	no	yes	yes	yes
Monitoring and Alarms	no	yes	yes	yes

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Sampling planning and management	no	no	yes	Yes
Data Retrieval from Analytical Devices	None	Agilet HPLC, Beckmann Coulter VICELL, Optocell, Cubian, Gilson Autosampler, Thermo Scientific GC, Nova Flex, Nova Bioprofile and many others		
Interactive Data Analysis	no	yes	yes	yes
Performance Analysis	no	no	yes	yes
Reporting	no	yes	yes	yes
Password protection	no	yes	yes	yes
User definable access rights	no	yes	yes	yes
DATA MANAGEMENT				
Data storage system	Oracle database	Oracle database	Oracle database	Oracle database
Minimum sampling frequency	1 second	1 second	1 second	1 second
Sample frequency selectable per parameter	yes	yes	yes	yes
Data reduction definable per parameter	yes	yes	yes	yes
Data export to Excel	yes	yes	yes	yes
Data export in ASCII format	yes	yes	yes	yes
Graph export in graphics format	yes	yes	yes	yes
Off-Line data handling	no	yes	yes	Yes
Automated off-line data handling	no	no	no	yes
On-line calculations using on-line and off-line data	no	yes	yes	Yes

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DATA DISPLAY				
Line graphs	yes	yes	yes	yes
Maximum number of pens per graph	8	8	8	8
Synoptic	yes	yes	yes	yes
Procedure flow chart	no	yes	yes	yes
Combination of current and historic data in graphs	yes	yes	yes	yes
Combination of different active batches in graphs	yes	yes	yes	yes
Measured data table display	yes	yes	yes	yes
Scatter plots	yes	yes	yes	yes
Storage of predefined graph settings	yes	yes	yes	yes
SUPERVISORY CONTROL				
Programming of time based actions	no	yes	yes	yes
Programming of event based actions	no	yes	yes	yes
Profiling of setpoints	no	yes	yes	yes
Manual setting of local control setpoints	no	yes	yes	yes
Recipe definition	no	yes	yes	yes
OTHER				
Notebook for process and equipment remarks	yes	yes	yes	yes
Event viewer for system comments	yes	yes	yes	yes
Batch reports supported	no	no	yes	yes