

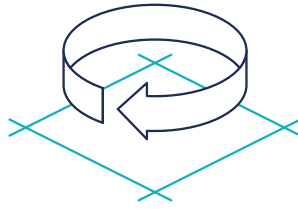
For a powerful, robust and intuitive automation, control and analysis of your bioprocesses at lab- and pilot- scales.



ROSITA SOFTWARE

Bioprocess
Lab and Pilot
Equipment

CONTROL AND AUTOMATION

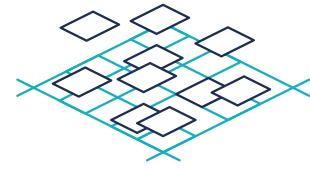


Bionet understands the growing needs to enhance reproducible, consistent and qualified processes.

ROSITA helps to this by reducing manual tasks at the lab and allows for a tight process control via a number of strategies:

- Manual operation via the activation and direct configuration of some actuators such as the pumps, the agitator and the gas flows.
- Automatic operation via set point profiling of parameters such as temperature, pH and dissolved oxygen. These control loops will activate the involved actuators according to PID and other control strategies.
- Recipe-based automatic control that allows for the configuration of different stages and transitions according to time- and/or event- related conditions.

VISUALIZATION AND ANALYSIS



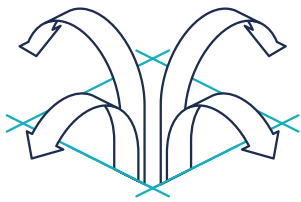
Bionet believes in the benefits that the use of analytics can bring in research and scaling-up studies.

ROSITA offers several tools in the field of process visualization and analysis, which enhance a complete understanding of the process and its optimization possibilities. These include:

- Trend graphs, with a number of configuration choices such as the selection of parameters and specific time frames, the visualization of independent “Y” axes for each parameter, etc.
- Comparative graphs for comparison analysis between current and historical batches.
- Introduction, visualization and management of offline data.
- Capacity for calculations according to specific requirements.



EXPANSION AND INTEGRATION

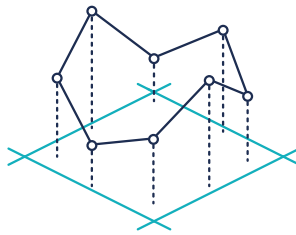


ROSITA is designed to be flexible to incorporate the measurement of a number of new in-situ process variables and to integrate them into advanced control mechanisms.

ROSITA is ready to embrace the solutions offered by Process Analytical Technologies, which users may need to increase the knowledge about the events that take place. These include, among others:

- Total and viable cells count.
- Exhaust gas composition.
- Dissolved gas.
- Additional modules for perfusion.

CONNECTIVITY

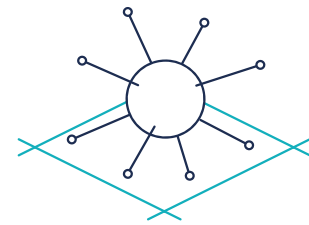


ROSITA is accessible 24/7, both on-site and remotely.

Enthusiastic about the technological developments that allow the connectivity between devices, Bionet has developed a proprietary license-free software that facilitates communication capabilities:

- A safe means for remote access from any user's phone/tablet/PC IP address via a safe VPN tunnel, for visualization and control of the process, acknowledgement of alarms, etc.
- Receipt of alarms status to a defined user's device.

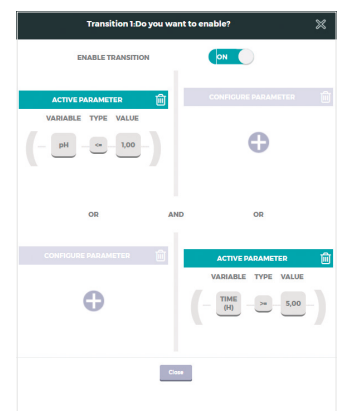
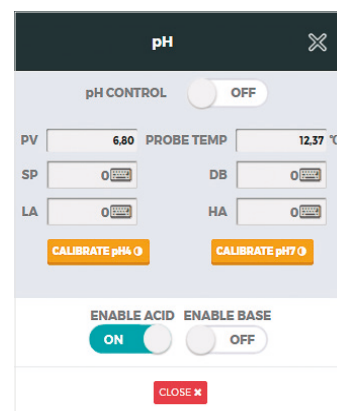
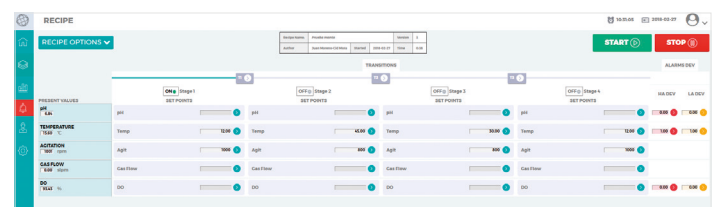
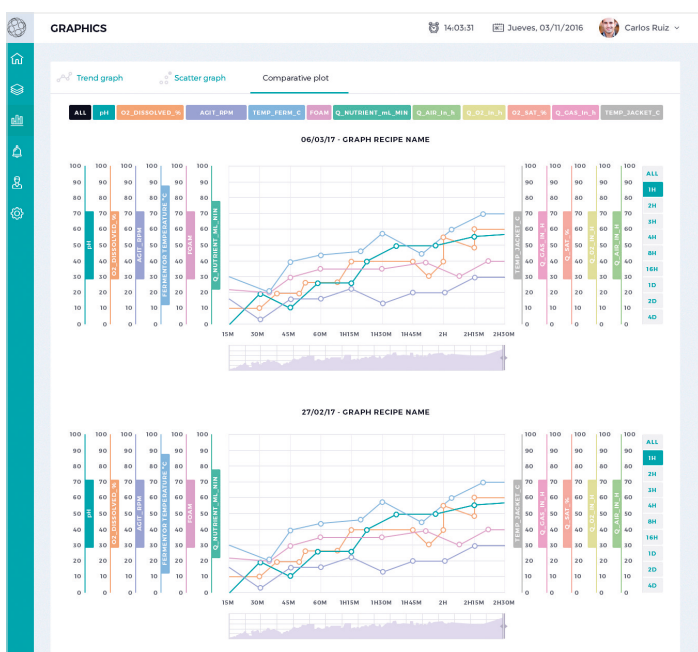
DATA MANAGEMENT



ROSITA treats and shows data in efficient, safe and intuitive ways.

Capabilities include:

- Registration of all online parameters as well as offline data recovered from other devices.
- Easy extraction of raw data in an ordered time-based CSV format, accessible by the user from a range of applications, including Excel and Access.
- Retrieval of snapshots of the graphs at any time.
- Generation of reports in PDF and Excel formats.



ROSITA DATA SHEET

BRONZE PACKAGE SILVER PACKAGE GOLD PACKAGE

AUTOMATION

Manual mode operation (i.e. control over pH and level)	●	●	●
Automatic control loops (i.e. control over temperature, pH, level and dissolved oxygen control)	●	●	●
Cascade control of DO levels (which acts on agitation, gas flows and nutrient addition pump)	-	●	●
Recipe management	-	●	●

VISUALITATION AND ANALYTICAL TOOLS

Trend graph	●	●	●
Data table (with min and max values)	●	●	●
Comparative Graph	-	●	●

DATA MANAGEMENT

Off-line data representation	-	-	○
Calculations with online data and possibility for these measurements to be integrated in control loops (specified by the client)	-	-	○
Calculations with offline data	-	-	○
Export of raw data in CSV format (for use in Excel/Access)	●	●	●
Export of graphs as pictures	-	-	●
Generation of reports	-	-	●

ALARMS

	●	●	●
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ACCESS & USER MANAGEMENT

Personal operation profile and password protection	-	●	●
User-level access rights	-	-	●

CFR21.11

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