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Fast bioreactor culture analytics for basic research: R&D through commercial production

RAPIDLab and RAPIDPoint Analyzers

Maximize bioreactor culture viability and product yield with reliable analytics

RAPIDLab® and RAPIDPoint® analyzers* from Siemens help to maximize biomass and product yields by generating fast results for critical analytes in bioreactor cell cultures.

With their small bench space requirements, microliter sample sizes, and delivery of results for multiple parameters in approximately 60 seconds, RAPIDLab and RAPIDPoint analyzers optimize cell culture environment testing right next to your bioreactor, at every stage of bioprocess development.

From laboratory R&D through scale-up to pilot testing and commercial production, results generated by RAPIDLab and RAPIDPoint analyzers support:

- Batch and perfusion bioreactor processes.
- Validation of results from primary analyzers and internal/in-line bioreactor probes.
- Verification of bioreactor probe calibration and accuracy.
- Optimization of a healthy culture environment for mammalian cells, bacteria, and yeasts.
- Progress monitoring of a bioreactor run.
- Determination of the consumption of metabolites and the production of waste.
- Balancing of culture electrolytes.
- Assessment of cellular respiration.
- Design of optimal feeding strategies.

Consistent, across-platform analytics on RAPIDLab and RAPIDPoint analyzers can help you maintain high quality cultures as your bioprocess development evolves and scales.

Regardless of which analyzer best meets your needs, you can be sure of satisfying results with a minimum of operator involvement and system maintenance.

*The uses for the instruments contained herein do not require FDA approval/clearance. The users are recommended to conduct validation for testing in the cell culture environment. The FDA cleared uses for RAPIDLab and RAPIDPoint analyzers have not been cleared to test samples other than whole blood.

Minimal-maintenance analyzers offer exceptional capabilities to support bioprocess development

	RAPIDLab 1200 Analyzers	RAPIDPoint 500 Analyzer	RAPIDLab 348EX Analyzer†
Multiple analyte test menu	Acid/base status Electrolytes Metabolites	Acid/base status Electrolytes Metabolites	Acid/base status Electrolytes
Space-saving footprint facilitates next-to-reactor analyses	W: 58.4 cm (23.0 in.) D: 55.9 cm (22.0 in.) H: 57.2 cm (22.5 in.)	W: 30.0 cm (11.5 in.) D: 42.0 cm (16.0 in.) H: 55.0 cm (21.5 in.)	W: 38.6 cm (15.2 in.) D: 38.0 cm (14.9 in.) H: 37.1 cm (14.7 in.)
Fast time to menu results improves culture monitoring when pH, pO_2 and pCO_2 change rapidly	Approximately 60 seconds	Approximately 60 seconds	Approximately 60 seconds
Flexible accommodation of different sample temperatures	10.0–43.9°C (50.0–111.0°F)	10.0–43.9°C (50.0–111.0°F)	10.0–43.9°C (50.0–111.0°F)
Easy-to-use operator interface	Intuitive color touchscreen and onboard help menus Video tutorials simplify training and daily operations	Intuitive color touchscreen and onboard help menus Video tutorials simplify training and daily operations	Intuitive color touchscreen and banner icons to notify operators
Long-lasting analyte measurement cartridge/reagents maximize system uptime	30-day, maintenance-free cartridge operation	28-day, maintenance-free cartridge operation	21-day use after opening
Automatic QC and calibration improve workflow	28-day Automatic Quality Control (AQC) cartridge verifies system performance without operator intervention	28-day Automatic Quality Control (AQC) cartridge verifies system performance without operator intervention	Comprehensive QC materials help verify system performance
Easy, automatic sampling	Biosafe, hands-free sampling	Biosafe, hands-free sampling	Biosafe, protected probe
Error-free data capture with bar-code reader option	Yes	Yes	Yes
Convenient onboard data storage	Results from 5000 samples	Results from 500 samples	Results from 340 samples
Versatile interfaces for results export	3 USB ports RS232 port RJ10/100Base-T Ethernet port	3 USB ports RS232 port 100Base-T Ethernet port Wireless communication via Ethernet bridge	2 USB ports RS232 port

†Not available for sale in the U.S. Product availability varies by country.

Siemens analyzers deliver precise results in seconds. Their ease of use helps to simplify cell culture environment testing at every stage of your bioprocess development.

RAPIDLab 1200 Analyzers

High throughput, walkaway monitoring when processes scale

- Cost-effective cartridge technology maximizes system uptime.
- Time-tested Ready Sensor® Electrodes ensure proven measurement accuracy with reliable, long-life stability.
- Compliance is simplified through fully-automated QC and calibration.
- Results are generated in three simple steps: Identify the sample, insert the syringe, and select Analyze.
- Flexible data review and reporting—results can be viewed on-screen, output to printer, or transmitted electronically.

RAPIDLab 1200 analyzers support a full test menu and provide high throughput for incremental testing demands.

RAPIDPoint 500 Analyzer

Comprehensive, lab-quality results

- Maintenance-free, cartridge-based system requires no gas tanks or reagent bottles.
- Biosafe, hands-free testing and automatic sample aspiration.
- Industry-proven planar sensor technology ensures results accuracy and reliability.
- Simplified compliance through fully-automated QC and calibration.
- Flexible data review and reporting—results can be viewed on-screen, output to printer, or transmitted electronically.

The RAPIDPoint 500 analyzer maximizes uptime with a 28-day measurement cartridge containing a full complement of analytes.

RAPIDLab 348EX Analyzer†

Economical, automated testing

- Cost-effective solution supports low-to-medium throughput.
- Enhanced workflow efficiency—simple sample aspiration and automatic calibration routines and wash sequences minimize operator involvement.
- Long-life Ready Sensor Electrodes ensure reliable, dependable results with minimal maintenance.
- Convenient front-panel access to all sensors, reagents, and waste.
- Flexible data review and reporting—results can be viewed on-screen, output to a printer, or transmitted electronically.

The RAPIDLab 348EX analyzer balances efficiency with value in the measurement of culture acid/base and electrolytes.

The analytical speed and throughput to accommodate low- to high-frequency cell culture sampling

Siemens' RAPIDLab and RAPIDPoint analyzers support test demand as applications scale, from daily assessments of the culture environment during R&D to high-frequency monitoring in commercial production. Immediate results facilitate real-time monitoring and real-time bioprocess adjustments.

Monitor common culture parameters during R&D.

Validate results from primary analyzers during process scale-up.

RAPIDLab and RAPIDPoint analyzers can help you maintain a healthy culture environment during commercial production.

For more information, visit siemens.com/healthcare or contact your local Siemens representative.

Product availability may vary from country to country and is subject to varying regulatory requirements. Please contact your local representative for availability.

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