REBEL® XT System

Product Specifications

Data Specification Sheet

Part ID: 850-00109

Overview

The REBEL® XT System is the latest evolution in at-line cell culture media analysis, designed to empower upstream bioprocessing teams with fast, actionable data—right at the bench. Compact and self-contained, the REBEL XT analyzer puts control directly in the user's hands, delivering results in approximately 15 minutes with minimal setup and no need for external labs or specialized operators.

Built on a foundation of proven performance and refined through years of customer feedback, the REBEL XT analyzer introduces a series of hardware and software enhancements that improve reliability, analytical power, and user experience. The system leverages advanced microfluidic technology and integrated signal processing to provide real-time, quantitative analysis of 22 critical media components—including 19 amino acids, 2 dipeptides, and choline—requiring as little as 10 µL per sample.

Each result is automatically calibrated, verified for performance, and delivered as a clear concentration value—eliminating the need for manual data processing. Engineered for ease of use and high-throughput demands, the REBEL XT unit sits directly on the benchtop and pairs with the REBEL SMArt® Kit, an all-in-one consumable set that simplifies sample preparation and ensures robust, repeatable quantitation.



Designed for seamless deployment from early development through GMP support, the REBEL XT System integrates easily into existing workflows and supports data visualization and multivariate analysis tools to deepen insight into nutrient dynamics, feed strategy optimization, and critical quality attributes (CQAs). Whether your focus is on protein production, cell and gene therapy, or media development, the REBEL XT System enables smarter decisions faster—minimizing risk, accelerating timelines, and improving yield and quality.

© 2025 Repligen Corporation. All rights reserved. The trademarks mentioned herein are the property of Repligen Corporation and/or its affiliate(s) or their respective owners. | DOC0419 eRev. 2.0 03 Sep 2025

REPLIGEN

Features | Benefits

Fast Turnaround	Quantitative results in ~15 minutes per sample for 22 key analytes.
At-line Convenience	Compact, self-contained system designed for benchtop analysis without outsourcing delays.
Simple Operation	Automated calibration, built-in performance checks, and intuitive reporting eliminate the need for specialized operators.
REBEL SMArt® Kit Compatibility	All-in-one consumable kit includes standards, diluent, chip, and background electrolyte.
Software Integration	Export and visualize data with JMP or integrate multivariate analysis using Sartorius SIMCA.
High Throughput	Analyze hundreds of samples with chip-based throughput and minimal prep.

System Specifications

Analyte Panel	Alanine, Alanyl-Glutamine, Arginine, Asparagine, Aspartic Acid, Choline, Cystine, Glutamic Acid, Glutamine, Glycine, Histidine, Isoleucine, Leucine, Lysine, Methionine, Phenylalanine, Proline, Serine, Threonine, Tryptophan, Tyrosine, Valine
Analysis Time	Approximately 15 minutes per sample
Calibration	Automated calibration and QC with consumable kits
Software Output	Quantitative concentration values (mM) Real-time report generation (CSV or PDF)
System Interface	Ethernet, USB port (2)
Integration Options	JMP, Sartorius SIMCA
Software Compliance	Designed for operation in cGLP/cGMP, with support for 21 CFR Part 11 compliance
Device Dimensions *(W x D x H)*	13 in x 27 in x 22 in (33 cm x 69 cm x 56 cm)
Weight	90 lbs (41 kg)

Operating Considerations

Sample Requirements	Fresh or spent cell media from mammalian or microbial cultures and fermentations with 10 µL minimum volume (prior to dilution); 96-well plate or chromatography vials; Cooled sample storage
Ambient Temperature	20–25°C (68–77°F)
Ambient Humidity	20–80% RH (non-condensing)
Device Compliance	UL/CSA/IEC 61010-1 3rd Edition CE marked EU & China RoHS EU REACH
Power Requirements	100–240 VAC, 50–60 Hz
Process Waste Handling	Solvent waste and condensate (water) collected in an appropriate external vessel (customer-supplied)

Customer Support Options

Support and Training	Repligen is committed to customer success from predelivery through installation and training. Included with purchase: • Full 12-month warranty support • Post-obsolescence hardware support • Software support
Available Options	Available as additional options: • Single- and multi-year service contract options, which include annual PM service • Preventative Maintenance (PM) service options
More information	Final application suitability of all materials and ratings are the sole responsibility of the user. Specified pressure and temperature ratings may be subject to limitations. Contact a Repligen's Analytics Representative for more information. Repligen and/or its affiliates, to the extent allowed by law, disclaims, and in no event shall be liable for, any incidental or consequential damages in connection with user, instrument, or system performance in relation to all content contained in this document, including but not limited to fitness for location of use, specific purpose for use, or application. Information, descriptions, and specifications in this publication are subject to change without notice. **Customer Support** analytics-support@repligen.com +1 908-707-1009 **Repligen Corporation** 685 Route 202/206 Bridgewater, NJ 08807, USA repligen.com © 2025 Repligen Corporation. All rights reserved. The trademarks mentioned herein are the property of Repligen Corporation or a Repligen affiliate, or their respective owners.

Contact

Repligen Corporation
685 Route 202/206
Bridgewater, NJ, USA 08807

analytics-support@repligen.com

(908) 707-1009

© 2025 Repligen Corporation. All rights reserved. The trademarks mentioned herein are the property of Repligen Corporation and/or its affiliate(s) or their respective owners. | DOC0419 eRev. 2.0 03 Sep 2025

REPLIGEN