







Glutamine Assay for Cedex Bio & Bio HT Analyzers

High testing performance and reproducibility

The Glutamine Assay developed for the Cedex Bio and Cedex Bio HT Analyzers provides accurate and consistent quantitative measurement of glutamine in cell culture and fermentation media. The assay technology is based on a colorimetric method where L-glutamine from a sample is deaminated by glutaminase and then oxidized by L-glutamate oxidase. The byproduct, $\rm H_2O_2$, generates quinone dye in the presence of peroxidase. The formation of dye is measured photometrically at 340 nm.

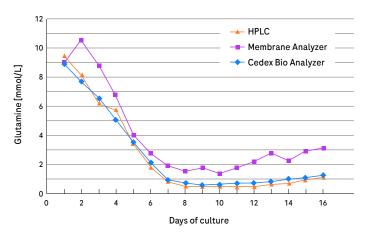
Glutamine
$$\xrightarrow{\text{GLNase}}$$
 Glutamate + NH₃

Glutamate $\xrightarrow{\text{GOD}}$ α -ketoglutarate + H₂O₂ + NH₃

H₂O₂ + 4-AAP + TOOS $\xrightarrow{\text{POD}}$ Quinone dye + H₂O

Trust results to make high confidence decisions

- Tight correlation with HPLC
- Pretreatment of L-glutamate prevents cross-reactivity
- Better accuracy than membrane analyzer



Glutamine Assay – Method Comparison. Glutamine concentrations in the cell culture medium over a culture period of 16 days were monitored on the Cedex Bio Analyzer, on a membrane analyzer, and with HPLC. (Verification data of Roche Pharma)

Benefit from a wide and sensitive measuring range

	Glutamine concentration	
Range	15 to 1,500 mg/L (0.1 to 10.0 mmol/L)	
	up to maximal solubility with automatic predilution	

Conserve sample with low volume requirement

• Sample volume of 2 µl per test

Save time with improved workflow efficiency

- No a sample filtration or pretreatment required
- Fully automated glutamine assay
- Ready-to-use reagents
- Highly reproducible
- Results are provided within 13 minutes with high precision and accuracy

	Glutamine Bio	Glutamine Bio H I
On-board stability	4 weeks	12 weeks
Calibration curve stability	84 days	84 days

Take control of your bioprocess with the Cedex portfolio

- Broad and expandable assay menu
- 2 instrument platforms with identical technology, menu and reagents to fit throughput, automation needs
- Solutions for development and manufacturing environments



	Level 1	Level 2	Level 3
Mean	1.74 mmol/L (253.8 mg/L)	3.89 mmol/L (569.2 mg/L)	8.44 mmol/L (1233.7 mg/L)
CV in-run	1.8 %	1.8 %	1.2 %
CV inter-run	2.3 %	2.7 %	1.9 %

Precision was determined on a Cedex Bio HT Analyzer with samples of three concentration levels. Coefficients of variation (CV) were calculated for in-run precision (n = 21) and interrun precision (on 10 days). Representative performance data are shown. Results obtained in individual laboratories may vary. (Evalulation data of Roche Diagnostics)

Ordering information

Product	Pack size	Catalog Number
Glutamine V2 Bio	4 x 50 tests	07 395 655 001
Glutamine V2 Bio HT	200 tests	07 395 612 001
Calibrator B Bio	6 x 0.5 ml	06 682 553 001
Control B Level 1 Bio	6 x 0.5 ml	06 682 561 001
Control B Level 2 Bio	6 x 0.5 ml	06 682 570 001
Control B Level 3 Bio	6 x 0.5 ml	06 682 588 001

Regulatory Disclaimer

For quality control/manufacturing of IVD/medical devices/pharmaceutical products only.

Trademark

CEDEX is a trademark of Roche.



Scan for ordering information for all Cedex Bio Analyzer and Cedex Bio HT Analyzer assays

© 2023 All rights reserved.

Published by

Roche Diagnostics GmbH Sandhofer Str. 116 68305 Mannheim Germany

custombiotech.roche.com

Please contact your local CustomBiotech representative

Europe, Middle East, Africa, Latin America mannheim.custombiotech@roche.com

United States

custombiotech.ussales@roche.com

Canada

custombiotech.can@roche.com

Asia Pacific

apac.custombiotech@roche.com