

# Glutamine Assay for Cedex Bio and Cedex Bio HT Analyzers

# High performance and reproducibility with accurate data

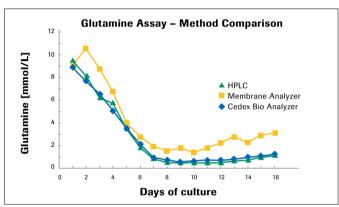
The Glutamine Assay developed for the Cedex Bio and Cedex Bio HT Analyzers provides *accurate* and *consistent* quantitative measurement of glutamine in cell culture and fermentation media. The assay technology is based on a colorimetric method where L-glutamine in a sample is deaminated by glutaminase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

Glutamine 
$$\xrightarrow{\text{GLNase}}$$
 Glutamate + NH $_3$  Glutamate  $\xrightarrow{\text{GOD}}$  a-ketoglutarate + H $_2$ O $_2$  + NH $_3$  H $_2$ O $_2$  + 4-AAP + TOOS  $\xrightarrow{\text{POD}}$  Quinone dye + H $_2$ O



## Trust results to make high confidence decisions

- Tight correlation with HPLC
- Pretreatment of L-glutamate prevents cross-reactivity
- Overestimate of glutamine by membrane analyzer



**Figure 1:** Glutamine concentrations in the medium over the production 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 Bio and Glutamine Bio HT	
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



#### Rely on efficiency to make the right decision Level 1 Level 2 Level 3 Mean 3.89 mmol/L 8.44 mmol/L 1.74 mmol/L (1233.7 mg/L) (253.8 mg/L) (569.2 mg/L) CV in-run 1.8 % 1.8 % 1.2 % **CV** inter-run 2.3 % 2.7 % 1.9 %

- ≤3% variability between duplicates (a & b)
- Automated dilution extended the measuring range

#### 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 HT
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

# **Ordering information**

Pack size	Catalog number
4 x 50 tests	07 395 655 001
200 tests	07 395 612 001
6 x 0.5 ml	06 682 553 001
6 x 0.5 ml	06 682 561 001
6 x 0.5 ml	06 682 570 001
6 x 0.5 ml	06 682 588 001
	4 x 50 tests 200 tests 6 x 0.5 ml 6 x 0.5 ml 6 x 0.5 ml

#### Regulatory disclaimer

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# **Trademarks**

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