CUSTOMBIOTECH

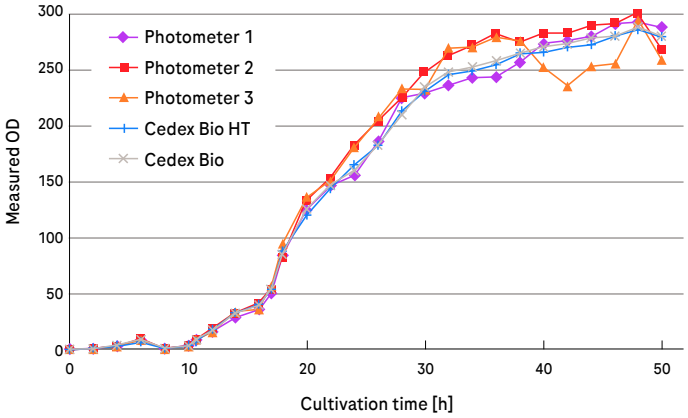
Roche

Optical Density determination on Cedex Bio & Cedex Bio HT Analyzers

Monitor the rise of biomass in your fermentation with high reliability and a minimum of manual interaction

Measurement of the optical density (OD), the parameter to monitor the rise of biomass, is both resource intensive and timeconsuming. With the fully automated OD assay from Roche, manual sample dilutions are no longer needed. The automated test provides results in minutes without compromised accuracy and precision in microbial fermentation. The photometric absorbance at 583 nm correlates to the concentration biomass in the culture.

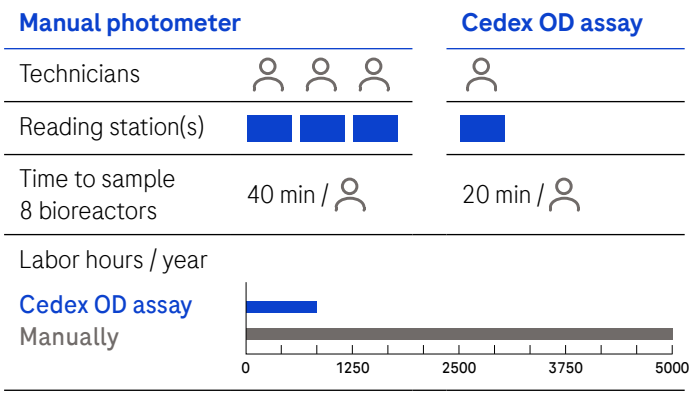
Achieve convenience and safety through tighter control
The OD assay compares with manual photometric measurements while providing improvements in data quality. Automated dilution and high instrument-to-instrument comparability result in optimal precision.



01
Method comparison: Optical Density of *E. coli* culture. The Cedex OD measurements show tight inter-instrument alignment and correlate well with the determination on three manual photometers. (Reference: Genentech evaluation data)

For use in quality control/manufacturing process only.

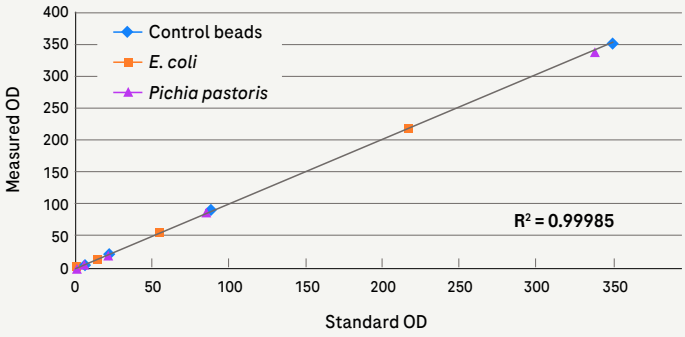
Save time with improved workflow efficiency
Genentech's evaluation of the Roche OD assay has shown significantly improved efficiency compared to manual photometric OD readings. These gains in efficiency impact the required time and resources.



02
Estimated efficiency gains based on Genentech's evalution of the Cedex OD assay.

Rely on a robust test procedure to make the right decision

The OD test's linearity has been shown with standards of known densities for different sample types:



03
Linearity of Optical Density on Cedex Bio HT Analyzer. Measurements of control beads, *E. coli*, and *Pichia pastoris*. (Roche Diagnostics evaluation data)

Benefit from a wide and sensitive measuring range
Test range: 0.1 - 360 OD
The wide range enables OD monitoring over the entire fermentation process, while eliminating the need for manual sample dilutions.

The precision of the OD test is typically <5%. Results were obtained from repeated determinations at three different density levels:

	Level 1	Level 2	Level 3
Mean value OD	2	20	150
CV in-run (21 replicates)	1.5%	1.7%	1.6%
CV inter-run (10 days)	1.9%	1.7%	1.7%

CV = coefficient of variation
(Roche Diagnostics evaluation data)

Ordering information
For determination of the optical density the following products are required in addition to the Cedex instrument with the general system reagents and accessories:

Product	Pack size	Catalog Number
OD Bio	4 x 100 tests	07 705 620 001
OD Bio HT	400 tests	07 705 654 001
Control OD Level 1	6 x 1 mL	07 766 637 001
Control OD Level 2	6 x 1 mL	07 766 645 001
Control OD Level 3	6 x 1 mL	07 766 670 001

Regulatory Disclaimer
For use in quality control/manufacturing process only.

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CEDEX is a trademark of Roche.

Genentech is a member of the Roche group.

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

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