

CELL GROWTH QUANTIFIER BioR (CGQ BioR)

Biomass Monitoring For Bioreactors



Bioreactor Challenges

No Biomass Monitoring

- Forces researchers to accept “black box” bioreactors with limited bioprocess understanding

Disadvantageous Biomass Sampling

- Requires hours of manual, hands-on time for offline OD sampling
- Results in growth curve estimates and missed metabolic events

Invasive Biomass Probe

- Blocks port of bioreactor
- Expensive
- Often only fits one vessel size



What Our Customers Say

“The CGQ BioR system provides precise growth curves with a very dense sampling interval, freeing my time for tasks with higher added value.”

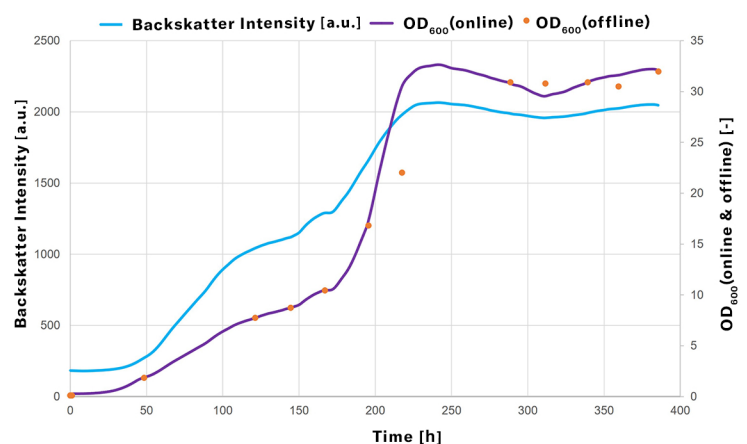
- Dipl. Ing. Andreas Hoffmann (Technical University Dresden)

Key Features

- Automated, non-invasive biomass monitoring
- Two measurement modes for high and low biomass concentrations
- Powerful DOTS Software for easy sensor handling and real-time data visualization

Benefits

- Generate high-resolution growth curves
- Save hours of manual, hands-on time required for offline OD sampling
- Free up bioreactor port space
- Cost-effective
- Quick start: No cleaning/sterilization required
- Actionable insights: Detect and react to real-time data right away

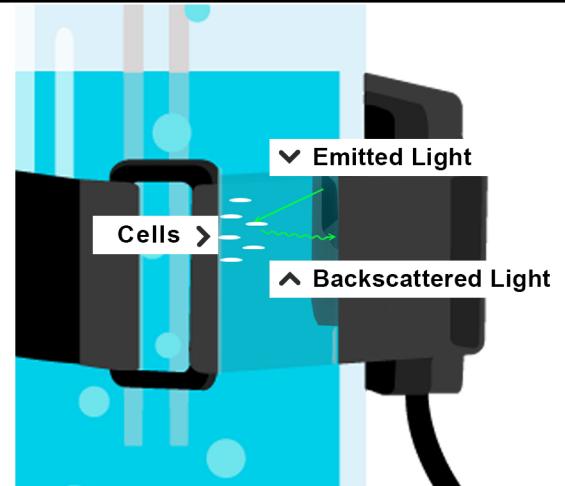


Backscatter intensity and OD₆₀₀ values for *Sulfolobus acidocaldarius* culture in a 3L bioreactor

How It Works

The CGQ BioR Sensor emits light into the bioreactor and measures the amount of light that is scattered back. The more cells that are in the bioreactor, the more light is scattered back.

The backscatter signal can be correlated with other parameters such as OD or Cell Dry Weight. The two measurement modes allow for monitoring of low and high cell densities.



Compatible With Your...

Bioprocess

- ✓ **For a broad variety of microbial organisms**
 - Bacteria and yeasts
 - Filamentous organisms
 - Phototrophic organisms
 - Anaerobic organisms
 - Thermophile organisms

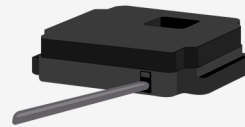
Lab Infrastructure

- ✓ **For different bioreactor types**
 - Single-jacket
 - Double-jacket and more
- ✓ **For different bioreactor sizes**
 - Microbioreactors
 - Benchtop
 - Production scale

Applications

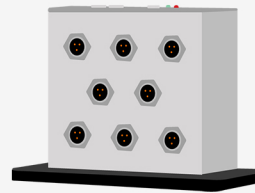
- ✓ **Growth characterization**
- ✓ **Screening**
- ✓ **Strain development**
- ✓ **Media optimization**

Components



CGQ BioR Sensor

Measures biomass non-invasively through the glass wall of the reactor.



CGQ BioR Hub

Provides sensors with electricity and collects data from all connected sensors.



DOTS Software

Powerful software for easy sensor handling and real-time data visualization.



Want To Connect The DOTS In Your Bioprocessing?

Contact Us