



ACCESSORIES SHAKERS

Cell Growth Quantifier – CGQ

Non-invasive online monitoring of biomass in shake flasks

The CGQ by aquila biolabs is a laboratory device for online monitoring of biomass in shake flasks without taking the flasks out of the incubation shaker.

The CGQ determines the biomass concentration automatically and non-invasively by a patented optical measurement. Thus, profound microbial growth kinetics of highest precision can be generated.

- **Non-invasive**
Consistent and undisturbed growth of microbial cultures
- **Automatic**
Saves hands-on time and costs
- **Real-time measurement**
React quickly to any deviations
- **High data density**
Detailed process monitoring at any given time
- **Parallel applications**
Monitor up to 64 shake flasks in parallel one one PC



Flask sizes
100 mL; 250 mL; 500 mL;
1000 mL; 2000 mL; 5000 mL



Suitable for
Algae, Archaea, bacteria, fungi,
plant cells, yeast



Footprint
Sensor plates: Ø 92–177 mm
Base Station starting from
44 x 105 x 109 mm (L x W x H)



Compatibility
With the INFORS HT shakers
and standard laboratory equip-
ment of all manufacturers

The CGQ consists of four components



The **sensor** plate is positioned under the shake flask and measures the biomass non-invasively. It is available for 5 flask sizes.



Each shake flask can be darkened with a **cover** to ensure measurements of highest precision and sensitivity.



The **base station** designed for 8 or 16 shake flasks bundles the data from all monitored flasks and sends it to the cgQuant software.



The **cgQuant** Software analyses and visualises the biomass signal from all monitored shake flasks.

Fits ideally on all glass and single-use flasks (with and without baffles), spring clamps and sticky plates («Sticky Stuff»).

Applications

The CGQ can be used for a diverse range of scientific applications, e.g.

- Growth-curve-guided induction of protein expression
- Media development / optimisation
- Screening / strain comparisons
- Detection of limitations and contaminations
- Analysis of growth kinetics
- Optimisation of culture conditions (filling volume, min⁻¹)
- Online monitoring of thermophile and phototrophic organisms

“The CGQ has enabled us to obtain accurate information on the growth kinetics of hyperthermophilic archaea and has solved the problem of manually generating data for prolonged periods of time and of dealing with evaporation effects due to the high temperature.”

Prof. Dr. ir. Eveline Peeters, Group Leader at Vrije Universiteit Brussel, Belgium

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