



Automatic Microbial Growth Curve Analyzer



STANDARDS

IEC 61010-1

IEC 61326-1

ISO 7218

Automatic Microbial Growth Curve Analyzer - QualiMGCA™ Auto

A Microbial Growth Curve Analyzer automates incubation, shaking, and optical growth tracking so you can generate repeatable growth curves without manual sampling. QualiMGCA™ Auto runs up to 36 samples in parallel, measuring QualiMGCA™ Auto at 600 nm on a programmable schedule while controlling temperature and agitation for stable cultivation conditions.

The system is designed for real-time, long-duration monitoring with reduced contamination risk. A sealed cultivation approach and non-sampling detection help protect sample integrity, while automated curve plotting supports fast comparison between strains, media, inhibitors, and process conditions.

APPLICATIONS

Automatic Microbial Growth Curve Analyzer - QualiMGCA™ Auto

Applications

- Fermentation screening and optimization Track growth kinetics across multiple formulations to compare lag phase, growth rate, and stationary phase timing under controlled temperature and shaking.

- Drug toxicity and antimicrobial evaluation Quantify growth inhibition by monitoring OD600 trends over time, making it easier to compare dose-response behaviors across test groups.
- Microbial metabolism and stress studies Evaluate the impact of environmental or chemical factors on growth dynamics using scheduled measurements and stable incubation control.
- Enzyme and bio-product development Screen strains and process parameters with parallel cultivation to identify candidates that reach target biomass faster or sustain growth longer.
- Anaerobic and aerobic organism research Supports both anaerobic and aerobic microorganisms, enabling side-by-side testing workflows when combined with proper sample handling and consumables.



Standards

- IEC 61010-1 – Safety requirements for electrical equipment for measurement, control, and laboratory use.
- IEC 61326-1 – EMC requirements for electrical equipment for measurement, control, and laboratory use.
- ISO 7218 – General requirements and guidance for microbiological examinations (good practice for microbiology labs).

FEATURES

Automatic Microbial Growth Curve Analyzer - QualiMGCA™ Auto Key Features

- Parallel throughput for faster screening: measures and plots growth curves for up to 36 channels in one run.
- Configurable detection schedule: adjustable measurement interval from 5 to 360 minutes to match fast or slow-growing organisms.
- OD600 monitoring at 600 nm: supports growth tracking with an OD600 range of 0-5.
- Stable cultivation control: temperature control from 4-45°C with programmable shaking (50-250 rpm).
- Long-duration studies: supports extended cultivation runs up to 1600 hours for slow kinetics and stability testing.
- Controlled access: permission management support for multi-user lab environments.

THEORY & METHOD

Theory and Method

QualiMGCA™ Auto builds growth curves by repeatedly measuring optical density at 600 nm and mapping OD versus time. OD600 is commonly used as a biomass proxy for many microorganisms in liquid culture, enabling non-destructive trend monitoring.

A typical workflow:

1. Load cultures into tubes (with appropriate caps/closures for your protocol).
2. Set the measurement interval and total run time.
3. Run controlled temperature and shaking to maintain consistent growth conditions.
4. The analyzer automatically records OD600 and generates growth curves for comparison across all channels.

TECHNICAL SPECIFICATIONS

Automatic Microbial Growth Curve Analyzer - QualiMGCA™ Auto Technical Specification

Specification	QualiMGCA™ Auto
Number of channels	36
Applicable microorganisms	Anaerobic and aerobic microorganisms
Detection interval	5-360 minutes (adjustable)
OD600 range	0-5
Measurement wavelength	600 nm
Temperature range	4-45°C
Shaking speed range	50-250 rpm

Specification	QualiMGCA™ Auto
Culture volume	2-10 mL
Culture time	Up to 1600 hours
Permission management	Available
Power (listed)	110 V / 60 Hz



ADVANCED TESTING TECHNOLOGIES

USA | CANADA | UAE | GCC | EU | INDIA | APAC | AFRICA | LATIN AMERICA

Connect with us

Contact our **QualiTeam** today to find out how we can help your organization **select the most suitable testing solution** for your application, requirements, and budget.

Qualitest USA (Corporate Sales Office)

Toll-Free: 1.877.884.TEST (8378) | Fax: 954.697.8211
E-mail: info@qualitest-inc.com
Address: 8201 Peters Rd., #1000,
Plantation, FL 33324, USA.

Qualitest Canada & International

Tel: +1.905.944.9825 | Fax: +1.905.944.0304
E-mail: sales@qualitest-inc.com
Address: 70 East Beaver Creek Rd., #9, Richmond Hill,
Ontario L4B 3B2, Canada.

Qualitest Latin America (Mexico and LATAM Region)

E-mail: ventas@qualitest-inc.com

Qualitest KSA (Regional Office)

Tel: +966 11 500 6659
Address: Level 7, 3.09, District 3, King Abdullah
Financial District, Riyadh, Saudi Arabia

Qualitest Singapore (ASIA PACIFIC Regional Office)

Tel: +65 6393 5480 | E-mail: singapore@qualitest-inc.com
Address: 50 Raffles Place, Singapore Land Tower,
Level 46, Singapore, 048623.

Qualitest Indonesia (Representative Office)

Tel: +62 21 2985 9522 | Fax: +62 21 2985 9889
E-mail: indonesia@qualitest-inc.com
Address: One Pacific Place Level 11, Jl. Jend. Sudirman,
Kav. 52-53, SCBD Area, Jakarta 12190, Indonesia.

Qualitest FZE (Regional GCC/ME Office)

Tel: +971 4 8819252 | Fax: +971 4 8819262
Email: gcc@qualitest-inc.com
Address: Jafza One, BB 1610, Jebel Ali Free Zone,
PO Box 261440, Dubai, UAE.

Qualitest India

E-mail: india@qualitest-inc.com
Address: 15th Floor, Dev Corpora, Pokhran Road No.1,
Eastern Express Highway, Thane, Maharashtra,
Mumbai, 400601, India

