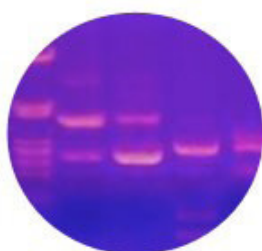


BIO-RAD

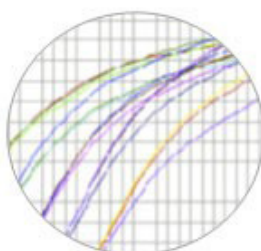
DROPLET DIGITAL PCR SYSTEMS

Powered by Bio-Rad – The Global Leader in Digital PCR Innovation

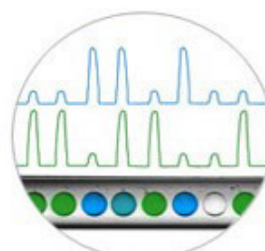
Representing the third generation of PCR technology, advancing beyond traditional end-point and real-time PCR to deliver absolute quantification of nucleic acids with unmatched precision.



**PCR
Qualitative**



**Real-Time PCR
Relative Quantitation**



**Droplet Digital PCR
Absolute Quantitation**

End point PCR provides only a simple yes or no answer, while real-time PCR improves on this by tracking fluorescence during amplification to give relative quantification. Droplet Digital PCR advances the workflow further by dividing each sample into thousands of tiny droplets, with each droplet acting as an individual reaction. Droplets containing the target sequence produce a fluorescent signal and are counted as positive, and those without remain negative.

Using Poisson statistics, the system then calculates the exact number of target molecules in the original sample. This partitioning removes the need for standard curves and avoids variability linked to amplification efficiency, resulting in exceptional sensitivity, reproducibility, and accuracy. It enables the reliable detection of rare genetic events, subtle fold changes, and low-abundance targets that other PCR methods may miss.

Precision Quantification for Every Application

Bio-Rad's Droplet Digital PCR systems set the standard for accuracy, sensitivity, and reliability in nucleic acid quantification. While traditional PCR offers only semi-quantitative results and quantitative PCR depends on reference standards, Droplet Digital PCR delivers true absolute quantification with no calibration required. Each reaction is divided into about 20 000 droplets, amplified, and analysed, and the balance of positive and negative droplets provides a precise measure of target concentration. This level of clarity and confidence enables researchers to advance work across oncology, infectious disease, environmental studies, and food testing.

ddPCR Applications:



Why Choose Bio-Rad ddPCR Systems?

- Absolute quantification: Confidently measure precise copy numbers
- Scalable platforms: From benchtop research to enterprise-level automation
- Streamlined workflows: Faster results with less hands-on time and lower sample input
- Proven reliability: Backed by over 14 years of ddPCR innovation and 70+ years of Bio-Rad excellence

Bio-Rad ddPCR by the Numbers:

- Peer-reviewed publications > 12 000
- ddPCR systems with proven performance 8
- Years advancing science 70 +
- Validated applications > 15
- Wet-lab validated mutation assays 1 895 +



QX200



QX600



QX Continuum



QX700 Series

Bio-Rad ddPCR System Comparison

Bio-Rad offers a comprehensive range of Droplet Digital PCR (ddPCR) systems designed to meet diverse laboratory needs - from manual workflows and small-scale research to fully automated, high-throughput environments. Each platform delivers the same core precision and reliability that define Bio-Rad's ddPCR technology, while varying in scale, capacity, and flexibility.

Feature	QX200	QX600	QX Continuum	QX700 E	QX700 S	QX700 HT
Channels	2	6	4	7	7	7
Input volume	20 µL	20 µL	16 µL	5 µL	5 µL	5 µL
Partitions	~20 000	~20 000	~25 000	~17 000	~17 000	~17 000
Automation	Manual / Partial	Manual / Partial	Full	Full	Full	Full
Throughput (plates)	1	1	1*	1**	4**	8**
Throughput (wells)	w	96	96	48	192	384
Time to result	6 hr	6 hr	6 hr	2.5 hr	8 hr	8 hr

* Standard 96-well PCR plate

** RDG48 plate

Choosing the Right ddPCR System for Your Laboratory

Bio-Rad's Droplet Digital PCR (ddPCR) portfolio offers solutions tailored to different research needs - from foundational studies to high-throughput screening. Explore our simple breakdown to help you identify the system that best matches your workflow, sample volume, and throughput requirements.

QX200 – The Proven Standard

The QX200 Droplet Digital PCR (ddPCR) System is Bio-Rad's original and most widely adopted ddPCR platform, trusted by researchers worldwide for its robust performance, reliability, and precision. Designed for low- to mid-throughput applications, it enables absolute quantification of target DNA or RNA using either EvaGreen or probe-based assays.

Ideal for researchers who prefer flexibility and manual control, the QX200 supports up to 96 samples per run and delivers consistent results across a wide range of applications, from gene expression and copy number variation (CNV) to rare mutation detection.

Key Benefits:

- High sensitivity and precision across diverse applications
- Compatible with both TaqMan® Hydrolysis and EvaGreen® chemistries
- 96-sample throughput with a straightforward manual workflow
- Reliable quantification for cancer biomarker detection, pathogen monitoring, NGS validation, gene expression, environmental, and food testing



Best suited for: Core academic or research labs conducting small to moderate study sizes.

Configurations:

IBRD1864001 QX200 DIGITAL PCR SYSTEM WITH LAPTOP

- System includes droplet generator, QX200 droplet reader, computer, software, associated component consumables, for EvaGreen or probe-based digital PCR applications

IBRD1864100 QX200 AUTO DG DIGITAL PCR SYSTEM

- System includes Automated Droplet Generator, QX200 Droplet Reader, computer, and QX Manager Software, Standard Edition.

QX600 – Expanded Multiplexing Capability

The QX600 Droplet Digital PCR (ddPCR) System builds on the proven design of the QX200, introducing six fluorescence channels for advanced multiplexing and simultaneous detection of multiple targets within a single well. This enhanced capability allows researchers to extract richer, more complex data without altering their familiar ddPCR workflow.

Supporting both TaqMan® and EvaGreen® chemistries, the QX600 enables detection of up to 12 targets per well, offering unparalleled flexibility for projects requiring multi-gene or variant analysis.

Key Benefits:

- Detect up to 12 targets per well with advanced six-colour multiplexing
- Compatible with both TaqMan® and EvaGreen® chemistries
- Cross-compatible with existing QX200 consumables for easy upgrade
- Ideal for oncology, NGS validation, cell and gene therapy, food testing, and wastewater monitoring



Best suited for: Advanced research requiring multi-target analysis or limited sample availability.

Configurations:

IBRD17007769 QX600 DROPLET DIGITAL PCR SYSTEM

- System includes droplet generator, QX600 droplet reader, computer, software, associated component consumables, for EvaGreen or probe-based digital PCR applications

IBRD17008371 QX600 AUTODG DROPLET DIGITAL PCR SYSTEM

- System includes Automated Droplet Generator, QX600 Droplet Reader, computer, and QX Manager Software, Standard Edition.

QX Continuum – Fully Automated Precision

The QX Continuum Droplet Digital PCR (ddPCR) System is engineered for laboratories ready to transition from manual to fully automated ddPCR workflows. It combines droplet generation and reading within a single instrument, delivering a streamlined 96-well workflow with approximately 25 000 partitions per reaction.

This integration ensures consistent, high-quality results with minimal hands-on time. Automation not only reduces variability but also enhances throughput and reproducibility, making the QX Continuum ideal for laboratories managing larger sample cohorts or requiring walkaway operation for maximum efficiency.

Key Benefits:

- Fully automated droplet generation and reading in one system
- Consistent performance with ~25 000 partitions per reaction
- 96-well plate compatibility for flexible sample processing
- Reduced hands-on time and improved reproducibility
- Ideal for clinical research, large-scale studies, and high-throughput assay validation



Best suited for: High-precision laboratories seeking reproducibility and automation efficiency.

Configurations:

IBRD12019613 QX CONTINUUM DROPLET DIGITAL PCR SYSTEM

QX700 Series – Speed and Scalability

The QX700 series represents the next generation of ddPCR technology, combining faster turnaround, high throughput, and miniaturised reaction volumes (5 µL) for greater efficiency and cost savings. Designed for laboratories with diverse workflow demands, the QX700 series supports bench-scale studies through to high-throughput production environments, all while delivering absolute quantification with exceptional sensitivity.

QX700 E – Entry-Level Efficiency

- Processes up to 48 samples per run with a 2.5-hour turnaround
- Compact design ideal for low-throughput or ad hoc studies
- Simple “insert and start” workflow with intuitive software

QX700 S – Medium-Scale Throughput

- Processes up to 192 samples per run, providing a balance of speed and capacity
- Supports seven-colour multiplexing with independent thermal control for each 16-well cartridge
- Ideal for multi-user laboratories requiring medium-scale, high-precision experiments

QX700 HT – High-Throughput Performance

- Processes up to 384 samples every 8 hours, with flexible dynamic sample loading
- Independent thermal control of each 16-well chip for random-access scheduling
- Designed for laboratories requiring maximum throughput and scalability, from bench-scale studies to full production workflows

Key Benefits Across the QX700 Series:

- Seven-colour multiplexing for complex multi-target analysis
- Miniaturised 5 µL reaction volumes for efficiency and reduced reagent costs
- Walkaway operation with intuitive software and touchscreen interface
- Flexible sample scheduling and high throughput to match research demands



Best suited for: Laboratories needing speed, scalability, and flexibility, from small ad hoc studies to large-scale, high-throughput ddPCR applications.

Configurations

- IBRD17011036: QX700 E Droplet Digital PCR System
- IBRD17010638: QX700 S Droplet Digital PCR System
- IBRD17010628: QX700 HT Droplet Digital PCR System



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