



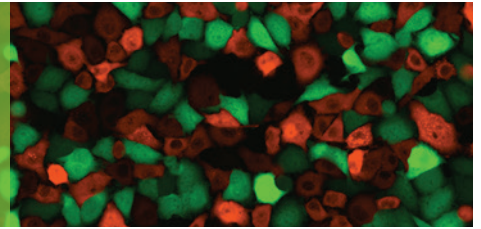
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Agilent Cell Analysis Life Science Instrumentation



Imagers and microscopes



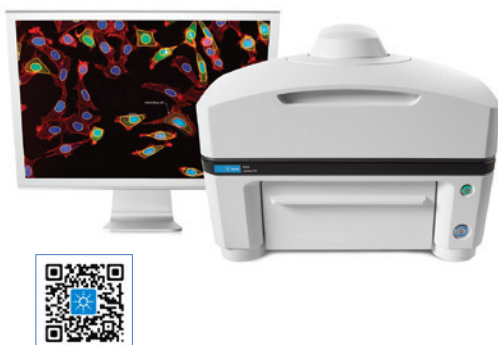
Agilent BioTek Cytation C10 confocal imaging reader

- Combines confocal imaging, widefield imaging, and multimode plate reading in one
- Spinning-disk confocal plus widefield imaging yields stunning images and analysis
- Water immersion objectives capture more light with lower exposure times
- Environmental controls enable live-cell imaging
- Hit picking: Imaging plus multimode detection saves time and data storage
- Variable bandwidth monochromators enable high sensitivity and specificity



Agilent BioTek Cytation cell imaging multimode readers

- Up to 60x fluorescence, brightfield, high-contrast brightfield, color brightfield, and phase contrast imaging
- Wide field of view allows fast, whole-well imaging
- Upright reflected- and transmitted-light microscopy
- Live-cell assay support with CO₂/O₂ control, incubation, and shaking
- Z-stacking and Z-projection, montage, stitching, and time-lapse videos
- Hybrid Technology that consists of filter-based and variable-bandwidth monochromator-based optics enables fluorescence detection
- Laser-based Alpha reading capability
- Peltier cooling module maintains ambient environmental stability



Agilent BioTek Lionheart automated microscopes

- Up to 60x air and 100x oil immersion magnification
- Brightfield, high-contrast brightfield, fluorescence, and phase contrast imaging channels
- Z-stacking and Z-projection, montage, stitching, and time-lapse videos
- Image-based and proprietary laser autofocus, autoLED intensity, and auto-exposure
- Live-cell assay support with incubation to 40 °C and CO₂/O₂ control

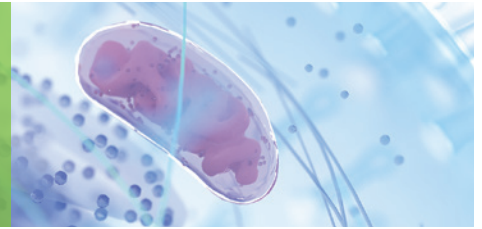
Research applications

- Live-cell imaging
- Wound healing assays
- Cell viability/cytotoxicity
- Protein quantification
- Nucleic acid quantification
- Histology/tissue imaging
- Neurite outgrowth studies
- Cell migration/invasion
- Cell proliferation
- ELISpot assays
- Biomarker quantification
- Whole-organism imaging
- 3D cell model imaging
- Subcellular/organelle characterization
- Phenotypic assays
- Slide scanning
- Immunofluorescence
- ADME-Tox

Instrument comparison

	Lionheart FX	Cytation C10	Cytation 9	Cytation 1
General				
Microplate Types	6- to 1536-well plates			
Other Labware	Slides, cell culture dishes and flasks, hemocytometers, chamber slides			
Incubation	To 40 °C	To 45 °C	To 65 °C	To 45 °C
Joystick Controller	•	•	•	
BioStack Compatible		•	•	•
BioSpa 8 Compatible		•	•	•
BenchCel Compatible				•
Multimode Plate Reading		•	•	•
Imaging				
Widefield Fluorescence	•	•	•	•
Confocal Fluorescence		•		
High-Contrast Brightfield	•	•	•	•
Brightfield	•	•	•	
Color Brightfield	•	•	•	
Phase Contrast	•	•	•	
Magnifications Available–Air	1.25x, 2.5x, 4x, 10x, 20x, 40x, 60x			
Magnifications Available–Oil	60x, 100x			
Magnifications Available–Water	40x, 60x			
Inverted Microscope	•	•	•	•
Upright Microscope			•	

Multimode microplate readers



Agilent BioTek Synergy Neo2 hybrid multimode reader

- Hybrid Technology that consists of filter-based and variable-bandwidth monochromator-based optics for fluorescence detection
- High-performance filter system that uses multiple photomultiplier tube (PMT) detectors
- Time-resolved fluorescence (TRF) and Alpha lasers for speed and sensitivity
- Live-cell support with temperature control to 70 °C, CO₂/O₂ control, and direct bottom illumination
- UV-Vis absorbance, fluorescence, luminescence, time-resolved fluorescence resonance energy transfer (TR-FRET), fluorescence polarization (FP), and Alpha



Agilent BioTek Synergy H1 multimode reader

- Hybrid Technology that consists of filter-based and variable-bandwidth monochromator-based optics for fluorescence detection
- Top/bottom fluorescence, UV-Vis absorbance, luminescence, FP, TRF, and TR-FRET
- Live-cell support with temperature control to 45 or 70 °C, and CO₂/O₂ control



Agilent BioTek Synergy LX multimode reader

- Affordable, easy-to-use multimode reader
- UV-Vis absorbance, 200 to 999 nm
- Filter-based fluorescence and luminescence
- Take3 microvolume plate compatible

Research applications

- High-throughput screening
- Drug absorption and metabolism
- Drug discovery and development
- Small-molecule inhibitors
- Cell proliferation
- Cytotoxicity
- Drug targeting
- Microvolume nucleic acid quantification*
- Microvolume protein quantification*
- Biomarker quantification
- Genetic analysis
- Environmental testing
- Food safety
- Nucleic acid quantification
- Rapid kinetics
- FRET
- TR-FRET
- Homogeneous time-resolved fluorescence
- Cytokines
- Fluorescence polarization
- AlphaScreen
- AlphaPlex
- SNP

*With the Take3 microvolume plate.

Instrument comparison

	Synergy Neo2	Cytation 1/9	Synergy H1	Synergy LX
General				
Microplate Types	6- to 1536-well plates	6- to 384-well plates (monochromator) 6- to 1536-well plates (filters and imaging)	6- to 384-well plates	6- to 384-well plates (onboard, absorbance) 96- and 384-well plates (onboard, fluorescence and luminescence) 6- to 384-well plates (via Gen5, all modes)
Gas Controller Compatible	•	•	•	
BioSpa 8 Compatible	•	•	•	
BioStack Compatible/Automation Ready	•	•	•	
BenchCel Compatible	•	• (Cytation 1 only)	•	
Dual-Reagent Injector Compatible	•	•	•	
Take3 Compatible	•	•	•	•
Temperature Control	To 70 °C	To 45 °C (Cytation 1) To 65 °C (Cytation 9)	To 70 °C ("M2" configurations)	
Peltier Cooling Module Option		•		
Condensation Control	•	•	•	
Key Features and Application Areas				
Monochromator-Based UV-Visible Absorbance	•	•	•	•
Monochromator-Based Fluorescence	•	•	•	
Variable Bandwidth Fluorescence Monochromator	•	Cytation 9	•	
Filter-Based Fluorescence	•	•	•	•
Luminescence	•	•	•	•
Filtered Luminescence	•	•	•	•
TRF and TR-FRET	•	•	•	
TRF Laser	•			
Fluorescence Polarization	•	•	•	
AlphaLISA/AlphaScreen	100 mw, 680 nm laser	100 mw, 680 nm laser (Cytation 9)		
Proprietary Hybrid Technology	•	Cytation 9	•	
Dual-PMT Read Head	•			
Upgradable to Imaging		•		

Absorbance microplate readers



Agilent BioTek Epoch 2 microplate spectrophotometer

- Large color touch screen interface with onboard software
- Filter-free 200 to 999 nm wavelength selection
- Reads 6- to 384-well plates and 2 μ L samples with Take3 microvolume plate
- Shaking and incubation to 65 °C with Condensation Control
- Cuvette port (option)



Agilent BioTek Epoch microplate spectrophotometer

- Select individual wavelengths from 200 to 999 nm, without filters
- Perform spectral scans, endpoint, kinetic, or well-area scans
- Take3 microvolume plate compatible



Agilent BioTek 800 TS absorbance reader

- Reads plate types from 6 to 384 wells
- Wavelength range from 400 to 750 nm (340 to 750 nm option)
- Temperature control and shaking (option)



Agilent BioTek LogPhase 600 microbiology reader

- Designed for microbial growth curve analysis
- Optimized incubation and Condensation Control for consistent growth conditions
- Targeted, powerful, and easy-to-use app

Research applications

- BCA assay
- ELISA
- NAD/NADH
- Turbidimetric assays
- Microvolume protein quantification*
- Bradford assay
- Kinetic ELISA
- DNA quantification
- Yeast growth assays
- Cell viability/toxicity
- Microbial growth studies
- RNA quantification
- Microvolume nucleic acid quantification*

*With the Take3 microvolume plate.

Instrument comparison

	Epoch 2	Epoch	LogPhase 600	800 TS
Key Features				
Wavelength Selection	Monochromator	Monochromator	Filters	Filters
Wavelength Range	200 to 999 nm	200 to 999 nm	560 to 640 nm (configuration dependent)	400 to 750 nm (340 to 750 nm option)
Absorbance Range	0 to 4.0	0 to 4.0	0 to 4.0	0 to 4.0
Filter Capacity	NA	NA	1	5
Microplate Types	6- to 384-well plates	6- to 384-well plates	96-well plates	6- to 96-well plates (6- to 384-well option)
Microplate Capacity	1	1	4	1
Shaking	Linear, orbital, double-orbital		Orbital	Linear
Temperature Control	To 65 °C		To 45 °C	To 50 °C
Fastest Read Speed—96 wells	8 s	15 s	< 60 s per plate	11 s
Gen6 Data Analysis Software Included	•	•		•
Gen5 Secure Software (Option)—Enables 21 CFR Part 11 Compliance	•	•	•	•
Other Labware Compatibility				
Cuvette Measurement	Cuvette port (option), Take3 microvolume plate or cuvette adapter	Take3 microvolume plate or cuvette adapter		
Take3 Microvolume Plate Measurement	•	•		
Automation Compatibility				
BioStack	•	"R" configuration		
BioSpa 8	•			
BenchCel	•			

Washers, dispensers, and combination systems



Agilent BioTek 406 FX washer dispenser

- 96-, 384-, and 1536-well microplates
- Fast microplate washing and up to six reagent dispensers in one instrument
- Automation friendly with left- and right-side robotic-arm access
- Wash buffer switching for up to four buffers
- Biomagnetic separation capability



Agilent BioTek MultiFlo FX multimode dispenser

- Dispense to 6- to 1536-well plates; wash 6- to 384-well plates
- 500 nL to 3 mL dispensing; from one to four reagents
- Dispense to individual wells with Random Access Dispensing (RAD) module
- Peristaltic pump and syringe drive technologies, fully modular and upgradable
- Gentle media exchange for 3D cell structures with Automated Media Exchange (AMX) module



Agilent BioTek 405 TS washer

- 96- and 384-well microplates
- Verify technology clog detection and Ultrasonic Advantage automated cleaning
- Gentle dispense and adjustable vacuum pressure for nondisruptive cell washing
- Automated switching of up to four buffers; programmable residual volume
- Magnetic and polystyrene bead assays, along with conventional ELISA

Washers, dispensers, and combination systems



Agilent BioTek ELx405 Select deep well washer

- 96- and 384-well, deep-well, and standard-height microplates
- Built-in ultrasonic cleaner option for effortless maintenance
- Wash cell assays with extralow flow option
- Wash buffer switching for up to four buffers



Agilent BioTek 50 TS washer

- Washer with several manifold options for 24-, 96-, and 384-well microplates
- Syringe pump that provides precise and accurate dispensing
- Wash buffer switching for up to three buffers
- Biomagnetic separation and vacuum filtration modules

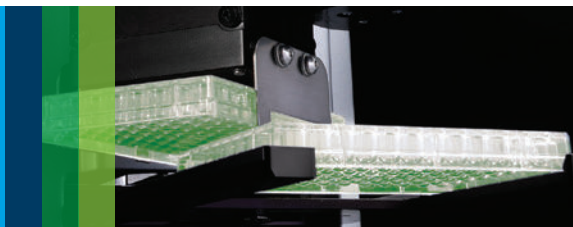
Research applications

- ELISA
- 2D and 3D cell-based assays
- ELISpot assays
- Multiplex assays
- Magnetic and polystyrene bead assays
- Gentle automated media exchange
- Filtration-to-waste processes
- HCS immunocytochemistry
- Screening assays
- Cell fixing and staining
- Compound storage
- Concentration normalization assays
- Genomics and proteomics
- Drug transport assays
- Calcium flux assay
- MSD assay automation
- Serum/plasma sample preparation

Instrument comparison

	Combination Systems		Washers	
	406 FX	MultiFlo FX	405 TS	50 TS
Key Features: Washing				
Plate Types	96- to 1536-well plates	6- to 384-well plates	96- and 384-well plates	24-, 96-, and 384-well plates
Low Profile and Standard Height	•	•	•	•
Solid and Filter Bottom	•		•	•
Deep Well		•	ELx405 Select	
Automatic Buffer Switching	•		•	•
Volume Range (per Well)	3 µL to 3 mL	20 µL to 30 mL	25 µL to 3 mL	25 µL to 3 mL
Full Plate Washing	•	•	•	•
Strip Washing		•		•
Washing Speed (96 Wells, 3 Cycles, 300 µL/Well)	≤ 30 s	≤ 130 s	≤ 30 s	≤ 80 s with 2 x 8-well manifold ≤ 130 s
Magnetic and Polystyrene Bead Assays			•	•
Dual-Action Manifold Available	•		•	
Overflow Protection	•	•	•	•
Key Features: Dispensing				
Plate Types	96- to 1536-well plates	6- to 1536-well plates		
Volume Range	500 nL to 3 mL	500 nL to 3 mL 500 nL to 30 mL (Random Access Dispensing)		
Peristaltic Pump Dispensing	•	•		
Syringe Pump Dispensing	•	•		
General				
AMX		•		
RAD Single-Channel Dispensing		•		
Variable Flow Rates	•	•	•	•
Microplate Shaking	•	•	•	•
BioSpa 8 Compatible		•	•	
BenchCel Compatible	•	•	•	
BioStack Compatible	•	•	•	
Liquid Handling Control Software Compatible	•	•	•	•
Ultrasonic Advantage Available	•		•	
Verify Technology Available			•	

Microplate automation



Agilent BioTek BioSpa 8 automated incubator

- Complete workflow automation from sample preparation to detection
- Temperature, CO₂/O₂ control, and humidity monitoring
- Recording of environmental conditions with automated alerts
- Compact for biosafety cabinet use
- Uncomplicated software and simple integration



Agilent BioTek BioStack microplate stacker

- Less than 10 seconds plate exchange time
- Delidding capability with Agilent BioTek BioStack 4 microplate stacker
- 24-, 48-, 96-, 384-, and 1,536-well plate compatible (BioStack model dependent)
- Direct control through washer and dispenser interface or via Agilent BioTek Liquid Handling Control (LHC) or Gen5 software
- Compatible with Agilent BioTek readers and liquid handlers (except 50 TS and 800 TS)



Agilent BenchCel microplate handler

- Fully automates workflows between Agilent BioTek liquid handling, detection, and imaging instruments
- Compatible with Cytation 1, Synergy Neo2 and H1, Epoch 2, 406 FX, 405 TS, ELx405 Select, and MultiFlo FX
- Scalable configuration integrates multiple instruments into a single benchtop system
- Several stack sizes, compatible with a variety of microplate types, including deep-well plates
- Flexible scheduling software

Peripherals and software



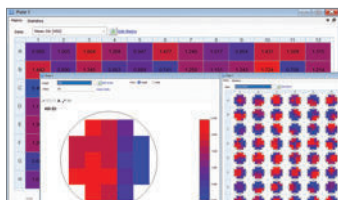
Agilent BioTek AutoScratch wound making tool

- Creates repeatable scratch wounds for automated kinetic cell migration and scratch wound assays
- Compatible with Lionheart automated microscopes and Cytation cell imaging multimode readers
- Simple installation and implementation
- Calculates percent confluence, wound width, and maximum healing rate (max V)



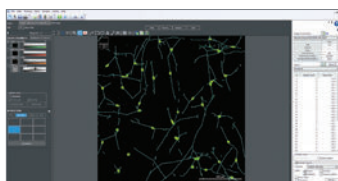
Agilent BioTek Take3 and Take3 Trio microvolume plates

- Up to 16 or 48 samples of 2 μ L for nucleic acid and protein quantification, without dilution
- Use with Epoch, Epoch 2, Synergy, and Cytation instruments
- Preprogrammed protocols for easy multisample measurements



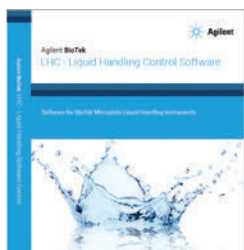
Agilent BioTek Gen5 data analysis software

- Controls all Agilent BioTek multimode and absorbance readers
- Walk-up usability—set up assay, analyze results, and export data in minutes
- Over 150+ quick-start protocols and predefined plate types
- Advanced functionality—multimode kinetics, area scans, and graphing options
- Automated data optimization tools including a fluorescence spectrum viewer and probe Z-height adjustment
- Offers the feature set needed to support 21 CFR Part 11



Agilent BioTek Gen5 software for imaging and microscopy

- Control of all Agilent BioTek microplate imagers and automated microscopes
- Powerful image collection, processing, and analysis
- Advanced image analysis with Agilent BioTek Gen5 Image+ and Image Prime software
- Agilent BioTek Gen5 Secure software supports 21 CFR Part 11
- Add-on modules provide expanded analysis and metrics for spot counting, neurite outgrowth, region of interest identification, and object tracking



Agilent BioTek LHC software

- Optional LHC software for computer control and programming of Agilent BioTek washers and dispensers
- Intuitive stepwise protocol creation with an unlimited number of methods included
- Custom maintenance reminders for continued instrument performance in busy laboratories
- Agilent BioTek LHC Secure software supports 21 CFR Part 11

Flow cytometry



Agilent NovoCyte flow cytometer (1-3 lasers)

- Powerful benchtop flow cytometer combining robust capabilities, user-friendly operation, and reliable performance
- Configurations of one to three lasers, with up to 15 fluorescent channels
- 24-bit, 7-log dynamic range removes the need for regular voltage/gain adjustment
- Able to perform absolute volumetric cell counting without the need for counting beads
- NovoSampler Pro offers walk-away autosampling convenience for a variety of plate and tube formats
- Intuitive Agilent NovoExpress software streamlines sample acquisition and data analysis without the need for dedicated operators



Agilent NovoCyte Advanteon/Quanteon/Penteon flow cytometers (1-5 lasers)

- Evolution of the high-performance and user-friendly NovoCyte flow cytometer platform
- Offers expanded assay flexibility with configurations of up to 5 lasers and 30 fluorescence detectors
- Innovative silicon photomultiplier detectors ensure high-gain and high-quantum efficiency and robust performance over long lifespan
- NovoSampler Q offers walk-away autosampling convenience for tubes and plates of up to 384 wells
- Intuitive NovoExpress software streamlines sample acquisition and data analysis without the need for dedicated operators

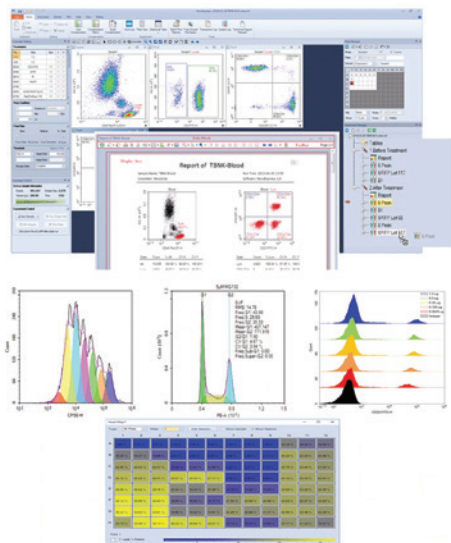
Spectral flow cytometry



Agilent NovoCyte Opteon spectral flow cytometer (3–5 lasers)

- Newest generation of flow cytometers; revolutionizes your cell analysis research
- Cutting-edge spectral flow technology enables up to 73 detectors, with high resolution and sensitivity
- Enables easy incorporation of normally incompatible fluorochromes from conventional flow cytometry together in the same panel
- Dual-laser small-particle detection capabilities suited for specialized research applications
- NovoSampler S offers walk-away autosampling convenience for tubes and plates of up to 384 wells
- Intuitive NovoExpress software streamlines sample acquisition and data analysis without the need for dedicated operators

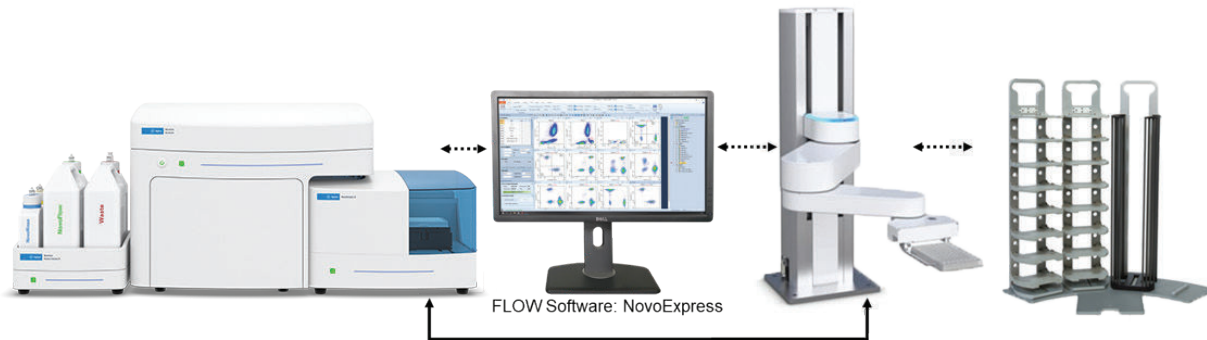
Flow cytometry software



NovoExpress software

- One software interface for all; combines sample acquisition and data analysis
- Enables analysis of acquired data in real time during flow experiment to maximize productivity and efficiency
- Customizable statistical parameters with live updates when running samples
- Powerful compensation tools and convenient adjustments allow accurate pre- and postacquisition compensation
- Batch analysis and reporting
- Enables easy creation of publication-quality figures with customizable plot scale, font, and legend
- Export as FCS (3.0, 3.1) or CSV files; import FCS files for analysis
- Includes data integrity features needed for compliance with regulatory requirements defined by 21 CFR Part 11

Flow cytometry automation



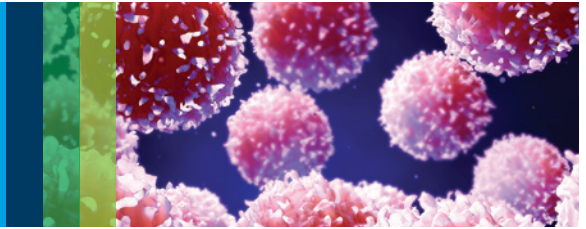
Robotic automation from Agilent

- Automation to enable 24/7 instrument operation for resource optimization and shorter time to results
- Lab automation friendly with open architecture and developer-ready application programming interface
- Compatible with robotic handling platforms to easily incorporate flow cytometry into your automated laboratory
- Ideal for large screening applications with long run times
- Optional large fluidic cart to minimize downtime for refilling sheath fluid and emptying waste

Instrument comparison

	Conventional Flow Cytometers				Spectral Flow Cytometer
	NovoCyte	NovoCyte Advanteon	NovoCyte Quanteon	NovoCyte Penteon	NovoCyte Opteon
General					
Number of Lasers	1–3	1–3	4	5	3–5
Maximum Fluorescence Detectors	15	21	25	30	70
Forward Scatter (FSC) / Side Scatter (SSC)	488 nm	488 nm	488 nm	488 nm	488 nm
FSC/SSC Sensitivity	200 nm	100 nm	100 nm	100 nm	80 nm
Sample Acquisition Rate	35,000 events/s	100,000 events/s	100,000 events/s	100,000 events/s	100,000 events/s
Sample Recovery Mode		•	•	•	•
Data Collection					
Software	NovoExpress	NovoExpress	NovoExpress	NovoExpress	NovoExpress
Dynamic Range	24-bit, 7-log dynamic range				
Output Data Files	Export as FCS (3.0, 3.1) or CSV files; import FCS files for analysis				
Quality Control (QC)	Automatic daily quality control with QC particles; Levey-Jennings plot				
Autosampling	NovoSampler Pro	NovoSampler Q	NovoSampler Q	NovoSampler Q	NovoSampler S
Robotic Automation		•	•	•	•

Impedance-biosensor real-time cell analysis (RTCA)



Agilent xCELLigence RTCA S16

- Label-free live-cell analysis uncovers unique biological insights
- One integrated cradle—measures a single 16-well biosensor E-Plate
- High temporal resolution—reads an entire 16-well plate in 3.2 seconds
- Deploys into standard cell culture incubator
- Compact system for assay development and pilot studies
- RTCA Software Pro supports FDA 21 CFR Part 11 compliance



Agilent xCELLigence RTCA DP

- Noninvasive, label-free live-cell analysis with maximal versatility
- Three cradles for independent measurement of 16-well biosensor E-Plates
- Ideal for chemotactic cell invasion and migration (CIM) assays
- High temporal resolution—reads an entire 16-well plate in 4 seconds
- Deploys into standard cell culture incubator
- RTCA Software Pro supports FDA 21 CFR Part 11 compliance



Agilent xCELLigence RTCA SP

- Label-free live-cell analysis provides a window into cell health and behavior
- Measures one 96-well biosensor E-Plate in 15 seconds
- Special accessories for rapid cell signaling assays (GPCR)
- Deploys into standard cell culture incubator
- Best suited for assay development and optimization
- RTCA Software Pro supports FDA 21 CFR Part 11 compliance

Impedance-biosensor RTCA



Agilent xCELLigence RTCA MP

- Automated, label-free live-cell analysis for around-the-clock answers
- Accommodates six 96-well biosensor E-Plates
- Measures one 96-well biosensor E-Plate in 15 seconds
- Designed for high throughput and multiple independent users
- Can be housed in your trusted cell culture incubator
- Ideal for therapeutic discovery, development, and QC
- RTCA Software Pro supports FDA 21 CFR Part 11 compliance



Agilent xCELLigence RTCA HT

- Automated live-cell analysis with multiplexing capabilities
- Connect up to four HT systems to monitor 1,536 wells simultaneously
- Automation-ready for short- and long-term monitoring of cell responses
- Measure cell health and behavior rapidly (6 seconds for 384-well plate)
- Perfect for high-throughput screening in immunotherapy and virology



Agilent xCELLigence RTCA Cardio

- Assessment of cardiomyocyte viability and contractility
- One cradle to accommodate 96-well biosensor E-Plates
- Deploys into standard cell culture incubator
- Screen compounds for cardiotoxicity and proarrhythmia
- Measures one 96-well E-Plate Cardio in 12.9 milliseconds
- Same flexible use over days and weeks to monitor cell viability



Agilent xCELLigence RTCA CardioECR

- Simultaneously monitor ion channel activity, contractility, and viability
- Predictive for cardiac risk assessment and cardiovascular drug discovery
- One cradle to accommodate 48-well biosensor E-Plates
- Deploys into standard cell culture incubator
- Measures one 48-well E-Plate CardioECR in 2 milliseconds
- Intuitive data evaluation to analyze beating rates, beating amplitudes, and field potential waveforms across different samples, time points, and experiments

Impedance-biosensor RTCA



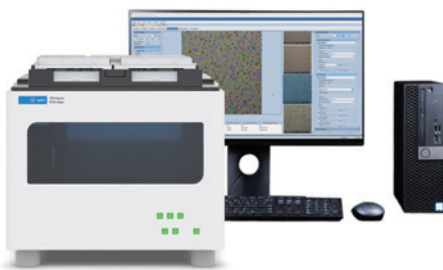
Agilent xCELLigence RTCA ePacer

- Assessment of cardiomyocyte viability and contractility
- Functional maturation of hiPSC cardiomyocytes via directed electrical pacing
- Six cradles that accommodate 6 x 96, 6 x 48, 3 x 96, or 3 x 48 biosensor E-Plates
- E-Plate Cardio VIEW 96 allow for visual confirmation
- Pacing settings can be flexibly tuned across individual columns and E-Plates
- Improves functional properties, structure, and gene expression in two to three weeks
- Measures one 96-well E-Plate Cardio in 4 milliseconds
- Deploys into standard cell culture incubator



Agilent xCELLigence RTCA HT-BioTek BioSpa 8 system

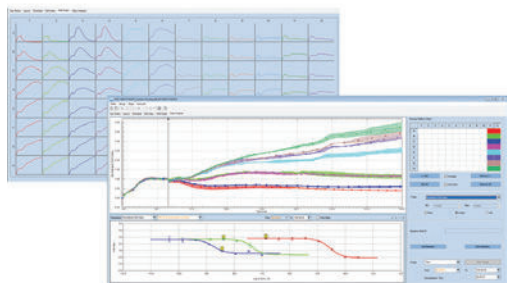
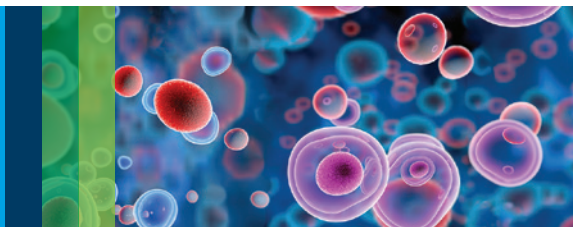
- Accommodates to 8 x 384-well plates for high-throughput screening
- Features robotic transfer from incubator to HT and back for hands-free measurements
- Enables data acquisition from an entire 384-well E-Plate in 6 seconds
- Total footprint for automated system is less than 6 feet wide and 2.5 feet deep
- Enables screening of neutralizing antibodies, virus-mediated cytopathic effect (CPE), antibody-mediated cytotoxicity (ADCC), and more



Agilent xCELLigence RTCA eSight System

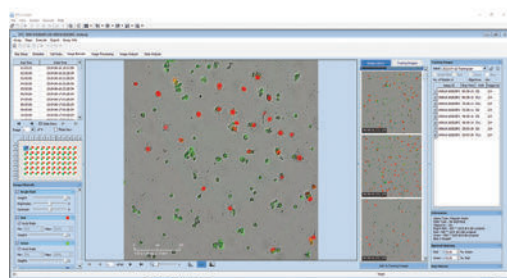
- Simple mix-and-read reagents (imaging) or label free (impedance)
- Two instruments in one—use the power of both impedance and imaging in the same well for increased biological insights and validation
- Measure cell health and behavior rapidly (3 seconds for 96-well plate)
- High throughput—run 5 x 96-well plates simultaneously inside an incubator
- 5x, 10x, and 20x objectives with brightfield, and green, red, and blue fluorescent channels
- Whole-well imaging spanning six wells up to 384-well capability and supporting a wide variety of labware types (for example, T25 flasks, 35 to 60 mm petri dishes, 12-, 24-, 48-, and 96-well plates)
- Deploys into cell culture incubator
- Enhanced compliance functionality—Introduction of a new 21 CFR Part 11 compliance license, including secure user access management, electronic signatures, audit trails, and data protection features for regulated environments

RTCA software



Agilent RTCA Software Pro

- Easy to use and intuitively analyzes real-time data, generates diverse plot types, and automatically calculates dose–response curves and parameters such as percent cytotoxicity, IC_{50} , or KT_{50}
- Quickly evaluates efficacy of different treatments with automated normalization and compensation features
- Calculates slope, cell Index doubling time, percent of control, and EC_{50}/IC_{50} with RTCA Pro Basic
- RTCA Software Pro IMT module enables evaluation of the potency of immune cells (CAR T, natural killer, tumor-infiltrating lymphocytes), checkpoint inhibitors, and ADCC
- RTCA Software Pro Virology module streamlines TCID₅₀ and VRNT calculations, supporting vaccine development, antiviral drug evaluation, and therapeutic antibody development
- Supports FDA 21 CFR Part 11 compliance to ensure the authenticity and integrity of electronic data with the Compliance License



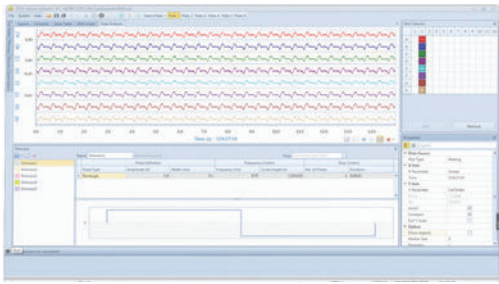
Agilent RTCA eSight software

- Single setup for dual measurements
- Multimodal data acquisition
- Information rich and powerful data analysis functions
- Drives key insights and discoveries with live-cell analysis applications, including cell health and viability, migration and invasion, immuno-oncology and cell function, and cell monitoring



Agilent RTCA Cardio and CardioECR software

- Offers real-time monitoring of the cardiomyocyte contractile activities and general health
- Analyzes cardiomyocyte beating rate, amplitude, and irregularity
- Provides quantitative data to assess compound cardio liability



Agilent RTCA ePacer software

- Flexible integration into your existing assay workflow
- Convenient view area on the E-Plate Cardio VIEW 96 allows for compatibility with other optical assays
- Extensive application functionality for cardiomyocyte workflows
- More physiological relevant models with functionally mature hiPSC cardiomyocytes
- Precise control of beating rate and pacing conditions over different durations produces functional and mature cardiomyocytes

RTCA consumables and reagents

Description	Sensor Substrate Material	Viewing Window	Part Number
E-Plate 16	Glass	No	5469830001
E-Plate VIEW 16	Glass	Yes	300601140
E-Plate 16 PET	PET	Yes	300600890
E-Plate 96	Glass	No	5232368001
E-Plate VIEW 96	Glass	Yes	300601020
E-Plate 96 PET	PET	Yes	300600910
E-Plate WOUND 96	Glass	No	300600970
E-Plate 384	PET	No	5867681001
E-Plate Cardio ECR 48	Biocompatible surfaces	Yes	300601110
E-Plate Cardio 96	Glass	No	300601050
E-Plate Cardio VIEW 96	Glass	Yes	300601080
E-Plate L8	Glass	Yes	300600840
E-Plate L8 PET	PET	Yes	300600870
RTCA CIM plate 16	PET	–	5665817001
E-Plate insert 96	Biocompatible surfaces	–	6465412001
E-Plate insert 16	Biocompatible surfaces	–	6465382001

Description	Notes	Part Number
eTox Green	For cytotoxicity experiments	8711008
eTox Red	For cytotoxicity experiments	8711009
eAnnexin V Green	For cytotoxicity experiments	8711006
eAnnexin V Red	For cytotoxicity experiments	8711007
eAnnexin V Blue	For cytotoxicity experiments	8711026
eLive Green	For cell health and viability experiments	8711003
eLive Red	For cell health and viability experiments	8711004
eCaspase Green	For apoptosis experiments	8711005
eCaspase Blue	For apoptosis experiments	8711027
eLenti Green	For cell health and viability experiments	8711010
eLenti Red	For cell health and viability experiments	8711011
eLenti Blue	For cell health and viability experiments	8711012
IMT assay (anti-CD40) sample kit		8100006
IMT assay (anti-CD40) tethering kit		8100005
IMT assay (anti-CD71) sample kit		8100018
IMT assay (anti-CD71) tethering kit		8100017
IMT assay (anti-CD9) sample kit		8100015
IMT assay (anti-CD9) sample kit		8100014

Research applications

- Cell proliferation
- Compound-mediated cytotoxicity
- Immune cell killing and ADCC
- Virus-mediated CPE
- Coculture using E-Plate inserts
- Wound healing
- Chemotactic cell invasion and migration
- Cell adhesion
- Cell barrier function disruption and recovery
- Cell signaling G protein coupled receptors (GPCRs)

Instruments, consumables, and software comparison

Assays	xCELLigence RTCA S16	xCELLigence RTCA DP	xCELLigence RTCA SP
Cell Characterization / QC	•	•	•
Immunotherapy / Cell Killing	•	•	•
Adhesion and Proliferation	•	•	•
Receptor Signaling	•	•	•
Chemotactic Invasion and Migration		•	
Live-Cell Imaging			
Wound Healing			•
Specifications			
Format	1 × 16 wells	3 × 16 wells	1 × 96 wells
Maximum Throughput	16 wells	48 wells	96 wells
Deployment	Incubator	Incubator	Incubator
Software			
RTCA Software Pro	•	•	•
RTCA eSight Software			
Consumables			
Biosensor E-Plate 16	•	•	
Biosensor E-Plate 16 PET	•	•	
Biosensor E-Plate VIEW 16	•	•	
Biosensor E-Plate Insert 16	•	•	
Biosensor E-Plate 96 PET			•
Biosensor E-Plate 96			•
CIM-Plate 16		•	
Biosensor E-Plate VIEW 96			•
Biosensor E-Plate Insert 96			•
Biosensor E-Plate WOUND 96			•
Biosensor E-Plate 384			

Assays	xCELLigence RTCA MP	xCELLigence RTCA HT	xCELLigence RTCA eSight
Cell Characterization / QC	•	•	•
Immunotherapy / Cell Killing	•	•	•
Adhesion and Proliferation	•	•	•
Receptor Signaling	•	•	•
Cell Invasion and Migration			
Wound Healing	•		•
Live-Cell Imaging			•

Specifications	xCELLigence RTCA MP	xCELLigence RTCA HT	xCELLigence RTCA eSight
Format	6 × 96 wells	1 × 384 wells	3 × 96 wells impedance 5 × 96 wells imaging
Maximum Throughput	576 wells	384 wells	288 wells impedance Up to 480 wells total for imaging
Deployment	Incubator	Room temperature	Incubator
Software			
RTCA Software Pro	•	•	
RTCA eSight Software			•
Consumables			
Biosensor E-Plate 16			
Biosensor E-Plate 16 PET			
Biosensor E-Plate VIEW 16			
Biosensor E-Plate Insert 16			
CIM-Plate 16			
Biosensor E-Plate 96	•		•
Biosensor E-Plate 96 PET	•		•
Biosensor E-Plate VIEW 96	•		•
Biosensor E-Plate WOUND 96	•		•
Biosensor E-Plate Insert 96	•		•
Biosensor E-Plate 384		•	

	xCELLigence RTCA Cardio	xCELLigence RTCA ePacer	xCELLigence RTCA CardioECR
Recording in Incubator	•	•	•
System			
IMP Electrodes	•	•	•
FP Electrodes			•
Electrical Pacing		•	•
Device			
Plate	E-Plate Cardio/E-Plate Cardio VIEW (96 wells)	E-Plate Cardio/E-Plate Cardio VIEW (96 wells) or E-Plate CardioECR (48 wells)	E-Plate CardioECR (48 wells)
Application			
Cell Attachment and Viability	•	•	•
Contractility	•	•	•
FP (Ion Channels) Assessment			•
Acute Assay (Seconds to Minutes)	•		•
Long-Term Assay (Hours to Days)	•	•	•
Recording			
Sample Rate	12.9 ms	4 ms	2 ms
Field Potential Sampling Rate	N/A	N/A	10 kHz
Sampling Capability	Simultaneous recording of impedance in 96 wells	Column by column	Simultaneous recording of impedance and field potential electrodes in all 48 wells
Stimulation			
Stimulation Voltage Range	N/A	-2.5 V to +2.5 V wells	-2.5 V to +2.5 V wells
Simultaneous Stimulation	N/A	Prespecified columns or entire plate	Prespecified columns or entire plate
Deployment	Tissue culture incubator	Tissue culture incubator	Tissue culture incubator

Cell analysis microplates



Storage and assay microplates

- 24- to 384-well microplates
- Use for short- and long-term storage of test molecules, down to $-80\text{ }^{\circ}\text{C}$
- Perform serial dilutions for IC_{50} and EC_{50} experiments
- Compatible with filter plates for filtrate collection applications
- Molded with medical-grade, chemical-resistant polymers



Reservoirs

- Open, column, row, and special well formats
- Use to store cells, media, and reagents during the preparation steps for any manual or automated cellular analysis assay
- 3 to 300 mL well volumes
- Custom well volumes to minimize dead volume
- Irradiated formats to maintain sample sterility



Filter plates

- 24- to 384-well microplates
- Incorporate commonly used media types such as glass fiber, polyethylene, polypropylene, nylon, polyethersulphone, and polyvinylidene fluoride
- Available in 10 kDa to $25\text{ }\mu\text{m}$ pore sizes, and 140 μL to 15 mL well volumes
- Suitable for vacuum and positive pressure manifolds or for centrifugation
- Ideal for protein purification, DNA/RNA and oligo isolation, and a wide range of sample preparation applications



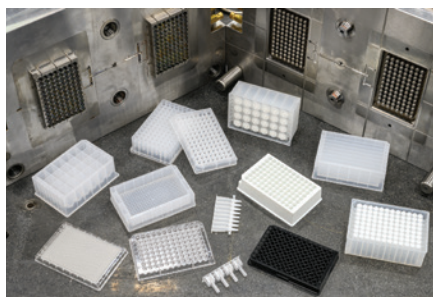
Cell culture and imaging microplates

- 96- and 384-well microplates
- Multifunctional plates for reader- and image-based cell analysis
- Provide high-quality, high-resolution imaging with low autofluorescence and superb optical quality
- ANSI/SLAS compatible plates accommodate manual and automated live-cell applications



Microplate lids and seals

- Universal lids for all microplates, available in clear or black polystyrene resin
- Custom cap mats available for sealing Agilent 24-, 48-, and 96-square-well microplates
- Pierceable and solid formats



Custom microplate services

- Agilent provides a complete custom microplate solution from design and production to delivery of your custom product
- Facilitated by the modular format of Agilent's microplate production capability, which allows various components to be interchanged to produce a large matrix of possible microplate configurations
- Production runs can be short, reducing the time and resources needed to produce your custom microplate products and lower the minimum order commitment quantities

Instrument/microplate compatibility

	Storage Plates	Reservoirs	Filter Plates	Cell Culture and Imaging Plates	Universal Lids and Seals
Absorbance Readers	+			* (204624-100 only)	
Multimode Readers	+	+		*	
Imagers (Cytation/Lionheart/eSight)	+	+		*	
Washers and Dispensers	+	+	* (Ask for plate compatibility)	*	
RTCA	+	+			
Seahorse	+	+			
NovoCyte	+ / * (Ask for plate compatibility)		+		

+ Use offline for assay setup / * Compatible with instrument



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