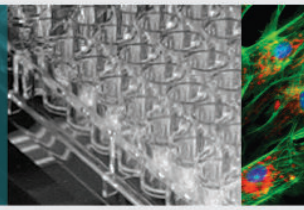
I M A G I N G

BioSpa™ Live Cell Analysis System



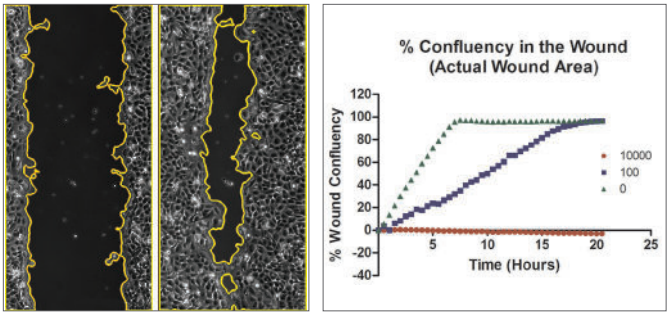
BioTek's BioSpa™ Live Cell Analysis System automates many applications in multiple plates for continuous live cell imaging and analysis. The core BioSpa System includes BioSpa 8 Automated Incubator and Cytation™ Cell Imaging Multi-Mode Reader – together, they automate kinetic live cell workflows in multiple plates for hours, days or weeks. It's easy to add one of BioTek's dispensers or washers to automate the entire process from cell culture, plating, media exchanges and washing through image capture and analysis. BioTek's Gen5™ Software easily enables high quality real time image capture and data-rich quantitative analysis for complete phenotypic expression data.

The system provides temperature, gas and humidity control for up to 8 microplates for short and long term assays. BioSpa's software seamlessly integrates and schedules liquid handling, incubation, imaging and data analysis while providing constant monitoring of all environmental conditions and processing steps. BioSpa's OnDemand mode provides a simple, efficient interface for imaging or detection-only workflows with multi-user flexibility. The BioSpa System brings increased productivity at an affordable price to many laboratories.

BioSpa 8 transfers microplates from its incubator to Cytation.

Typical Applications:

- 2D and 3D cell imaging
- Label-free cell counting
- Cell migration/scratch wound healing assays
- Cell proliferation and cytotoxicity assays
- Apoptosis assays
- Phenotypic assays



HT-1080 cells migrating in a scratch wound assay and image analysis in Gen5.

Features:

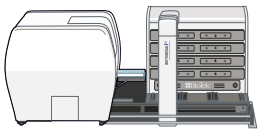
- Unattended automation for up to 8 plates or other labware
- Temperature and CO_2/O_2 control and humidity monitoring
- Time lapse, z-stacking and montage image capture
- Fluorescence, brightfield, color brightfield and phase contrast
- Up to 60x magnification and 4 color channels
- OnDemand mode for multiple users and on-the-fly labware addition/removal
- Continuously records environment conditions, includes customized notifications
- Powerful image analysis, cell counting, cytoplasm analysis, spot counting, subpopulation analysis
- Available media exchange and washing with added BioTek dispenser, washer or combined systems

BioTek®

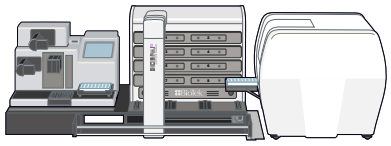
www.biotek.com

Configurations:

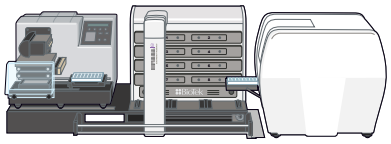
BioSpa Live Cell Analysis Systems can be configured with BioSpa 8 Automated Incubator, Cytation Imager and other compatible washers and dispensers.



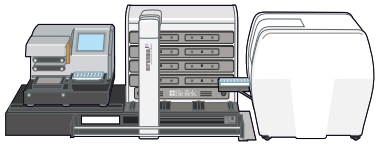
BioSpa 8 and Cytation



MultiFlo FX, BioSpa 8 and Cytation



EL406, BioSpa 8 and Cytation



405TS, BioSpa 8 and Cytation

BioSpa Live Cell Analysis System, left to right: MultiFlo FX, BioSpa 8, Cytation.

Technical Details:

General

Microplate types:	6- to 1536-well standard height microplates, with or without lids
Plate height range:	7.6 mm to 25.4 mm
Other labware supported:	Cell culture dishes (60 mm and 35 mm), T25 flasks
Lidded plate handling:	BioSpa 8 handles plate de-lidding or re-lidding
Microplate capacity:	Up to 8 microplates or other labware
Air filter:	User-replaceable HEPA filter
Compatible instruments:	Cytation 5, Cytation 1, EL406, 405 TS, 405 LS, MultiFlo FX
Temperature control:	To 45 °C
Software:	BioSpa Software; Gen5 Software; LHC Software *(instrument dependent)*
CO_2 and O_2 control:	Range: 0 - 20% (CO_2); 1 - 19% (O_2)
Humidity:	rH: 80 to 95% (lidded plates and 5% CO_2) Source: Removable water pan Water level sensor: Low water level alert

Imaging System

Imaging modes:	Fluorescence, brightfield, high contrast brightfield, phase contrast, color brightfield
Imaging method:	Single color, multi-color, montage, time lapse, z-stacking
Image processing:	Z-projection, digital phase contrast, stitching
Camera:	16-bit gray scale Sony
Objective capacity:	6 user-replaceable objectives
Objectives available:	1.25x, 2.5x, 4x, 10x, 20x, 40x, 60x
Phase objectives available:	4x, 10x, 20x, 40x
Image filter cube capacity:	4 user-replaceable fluorescence cubes plus brightfield channel
Imaging filter cubes available:	More than 20 colors available
Imaging LED cubes available:	365 nm, 390 nm, 465 nm, 505 nm, 523 nm, 590 nm, 623 nm, 655 nm, 740 nm
Automated functions:	User-trained autofocus, autofocus, autoexposure, auto-LED intensity
Autofocus methods:	Image-based autofocus, user-trained autofocus, laser autofocus *(option)*

Other

Technical details for BioTek microplate washers and dispensers vary by instrument. Contact BioTek for details.

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Technical details are subject to change.

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