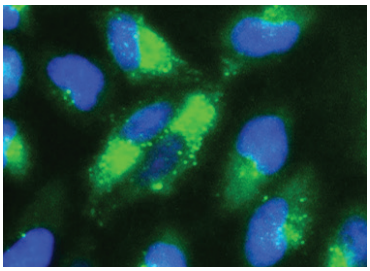
A U T O M A T E D M I C R O S C O P Y

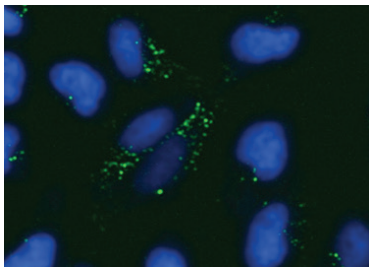
Lionheart™ LX Automated Microscope

BioTek's new Lionheart LX Automated Microscope is designed with affordability in mind, offering an alternative to expensive, custom-built automated microscopes that are complex to learn and use. The compact, ocular-free hardware design eases ergonomic discomfort.

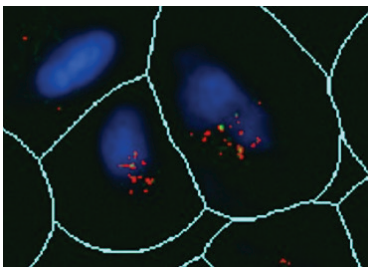
Along with Gen5 software, Lionheart LX enables Augmented Microscopy™, which fully automates image capture, processing and analysis. Load samples, start a run and come back to publication-ready images and quantitative data. Lionheart LX can help increase your research output while reducing processing time and costs.



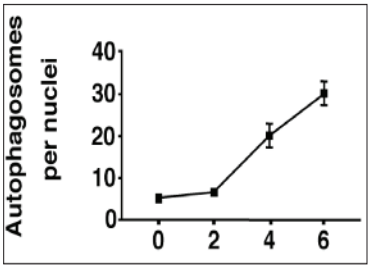
capture ▶



process ▶



analyze ▶



publish

Features:

- Affordable automated digital microscopy for microplates, slides, cell culture dishes and flasks
- High contrast brightfield, color brightfield and fluorescence imaging
- Augmented Microscopy™ with seamless image capture, processing and analysis: advanced expertise not required
- Quick analyze feature: instant cell count and confluence measurement from live feed, prior to image capture
- Fully integrated and compact design offers quick installation and setup

BioTek®
www.biotek.com

Typical Applications:

- Cell counting
- End point live cell assay including:
  - Apoptosis
  - Autophagy
  - Cell cycle
  - Cytotoxicity
  - Mitochondrial membrane potential
- Fluorescence in-situ hybridization
- Histology (H&E)
- Label-free cell counting
- Confluence
- Genotoxicity including:
  - Comet assay
  - γH2AX
- Immunofluorescence
- NASH assays using lipophilic fluorescent probes
- Phenotypic assays

Configurations:

LLX: Lionheart LX Automated Microscope. Fluorescence, high contrast brightfield and color brightfield imaging. Includes standard Gen5 software and 4-position slide holder. The imaging controller, objectives, filter/LED cubes, accessories and software upgrades are sold separately.

Optional Accessories:

- Gen5™ Secure for 21 CFR Part 11 compliance
- Gen5 Image+ and Image Prime Software for advanced image analysis
- Vessel adapters (T25, T75, 35 and 60 mm dishes, slides)
- Joystick Controller

See www.biotek.com for complete list of accessories.

Easy access to filter/LED cubes and objectives.

Technical Details:

General

Labware type:	Imaging: 6- to 1536-well plates
Other labware:	Microscope slides, Petri and cell culture dishes, cell culture flasks (T25, T75), counting chambers (hemocytometers), chamber slides Support for labware up to 1.5" tall
Stage control:	High resolution lead screw driven stage with open access
Software:	Gen5™ 3.0 Microplate Reader and Imager Software included; Gen5 Image+ and Image Prime software for advanced image analysis (option)

Imaging

Imaging modes:	Fluorescence, high contrast brightfield, color brightfield
Imaging methods:	Single color, multi-color, montage, time lapse, z-stack, z-stack montage, burst mode
Image processing:	Z-projection, digital phase contrast, stitching, deconvolution
Light source:	High power LEDs (available wavelengths: 365 nm, 390 nm, 465 nm, 505 nm, 523 nm, 590 nm, 623 nm, 655 nm, 740 nm)
Camera:	16-bit gray scale, Sony CMOS, 1.25 megapixel
Camera binning:	Optional 2x2 binning for focus and/or image capture
Camera exposure range:	5 milliseconds – 4 seconds
Image outputs available:	Raw Images: 16-bit TIFF Saved Images: TIF, JPG, BMP, PNG, EMF, GIF Movies: MP4, WMV
Filter cube capacity:	Up to 4 onboard, user-replaceable cubes
Colors available:	DAPI, CFP, GFP, YFP, RFP, Texas Red, CY5, CY7, Acridine Orange, CFP-YFP FRET, Chlorophyll, Phycoerythrin (PE), Propidium Iodide, CY5.5, TagBFP, GFP (Ex)-CY5(Em), CFP FRET, 377 (Ex)-647 (Em), Oxidized roGFP2, 400 (Ex)-647 (Em)
Objective capacity:	6 onboard, user-replaceable objectives
Available objectives:	Air: 1.25x, 0.04 NA; 2.5x (2.25x eff), 0.07 NA; 2.5x (2.75x eff), 0.12 NA; 4x, 0.13 NA; 10x, 0.30 NA; 20x, 0.45 NA; 40x, 0.60 NA; 60x, 0.70 NA Oil: 60x, 1.42 NA; 60x, 1.25 NA; 100x, 1.40 NA; 100x, 1.30 NA High NA: 20x, 0.75 NA; 40x, 0.95 NA
Image collection rate:	Single Well Fastest Frame Rate Capture: - Full Resolution: up to 10 frames per second for single color images - 2x2 Binning: up to 20 frames per second for single color images
Automated functions:	Autofocus, user-trained autofocus, autoexposure, auto-LED intensity
Autofocus method:	Image-based autofocus Laser autofocus option
Microscope stage control:	Gen5 Software Control Optional joystick controller

Physical Characteristics

Power:	60 Watts max.
Dimensions:	18.3" D x 17.9" W x 14.1" H (46.5 cm x 45.5 cm x 35.8 cm)
Weight:	51 lbs (23.1 kg)

Regulatory

CE and TUV marked. RoHS compliant. Configurations for *In Vitro* Diagnostic use are available.

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Technical details are subject to change.

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