

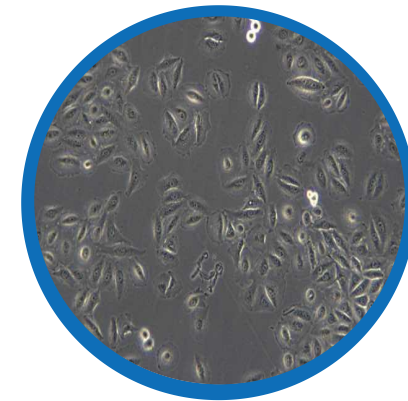
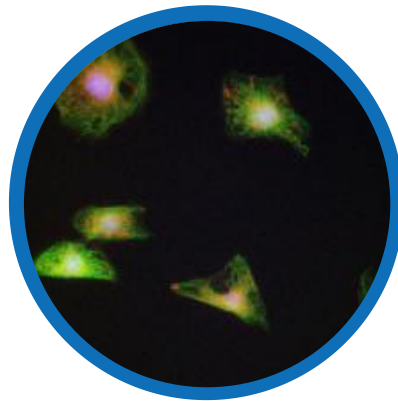
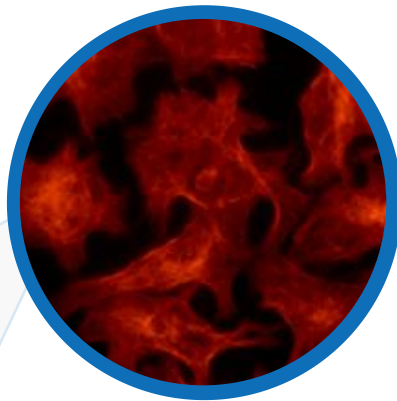
Mshot

MICROSCOPE SYSTEM & IMAGING SOLUTION SUPPLIER

Guangzhou Micro-shot Technology Co., Ltd

www.m-shot.com

sales@mshot.com



COMPANY PROFILE

About the company

-  **Start from:** 2003 year
-  **Head office:** Guangzhou City, China
-  **Positioning:** Microscope imaging system supplier and solution provider
-  **Vision:** To be leader in microscope industry of China
-  **Business scope:** Localization of microscopic imaging products and important components

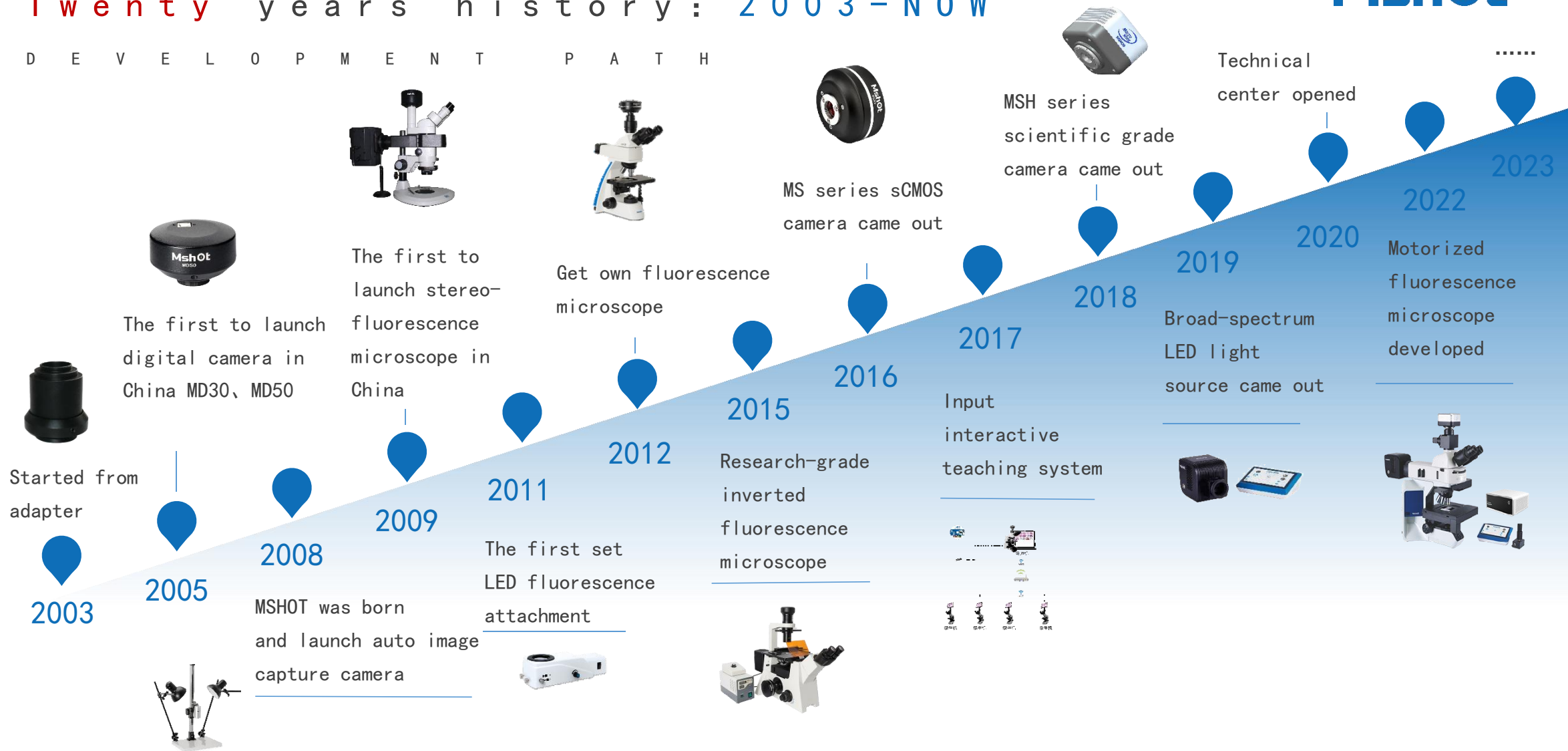


Founder
Dr. David Zhang

Twenty years history: 2003 - NOW



D E V E L O P M E N T P A T H



Star products

- Biological microscopes
- Fluorescence microscopes
- LED fluorescence attachments
- LED fluorescence light sources
- Heating stage
- Cameras and software

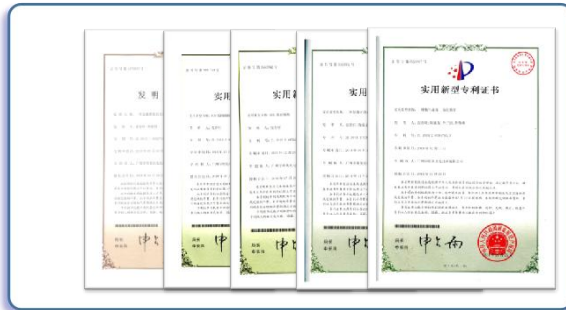
Other products

- Stereo microscopes
- Metallurgical microscopes
- Polarizing microscopes

Qualifications



Patent



Technical qualification



Software copyrights



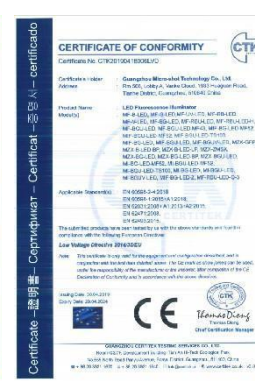
ISO9001
Quality



ISO13485
Medical device



ISO14001
Environment



CE



FCC

Sales channels Distribution 90%



Established

Year of 2003

Head office & Branch

China &
Singapore



Chinese brand

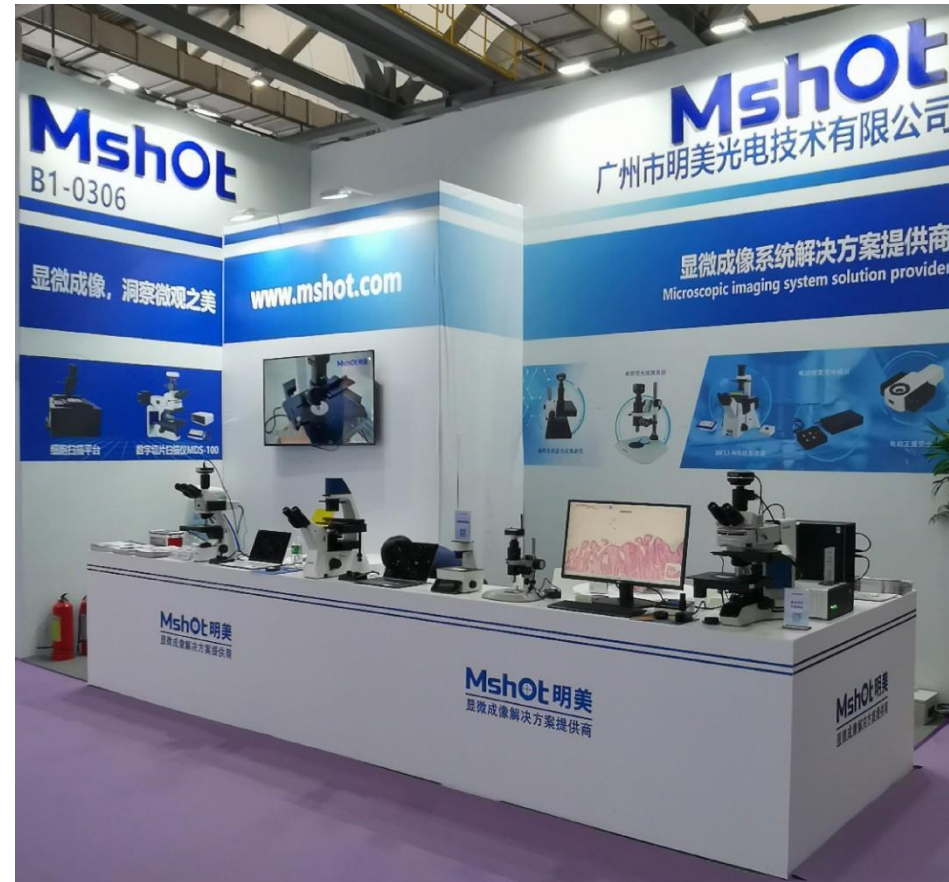


Singapore brand

From Guangzhou of China to overseas

S r o u n d i n g s

MshOt



Featured **upright** biological microscopes

(Top) Upright biological microscope ML51-N
Scientific research, pathology lab



- Application range: Pathology, tissue biology and other routine scientific research and medical fields
- International standard optical path
- Light intensity manager and 5-hole **coded nosepiece**, with **brightness memory function** of each nosepiece
- Eyepiece field of view is **25mm and 23.5mm**
- Semi-apochromatic plan objectives also good at fluo.
- **Detachable mechanical stage**, good precision, high stability, convenient **motorized upgrade**
- One step upgrade to fluorescence
- Recommend used with cameras:
MSX11\MSX2\MSX1\MS60\MC50-S

ML51-N optional accessories



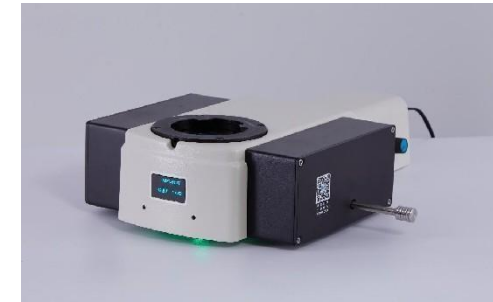
Phase contrast



DIC and polarizing



Multiview head

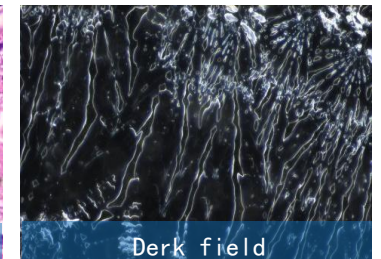
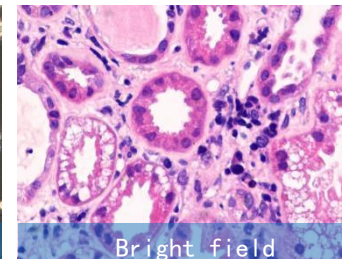
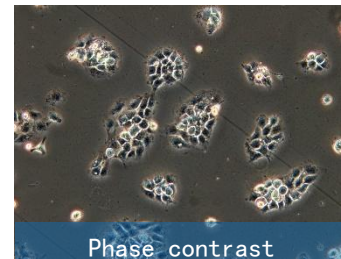
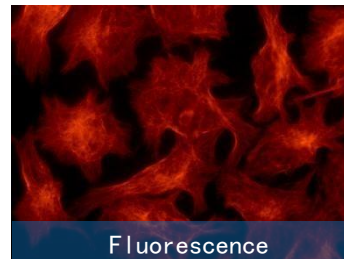


Fluorescence attachment

(Top) Research grade fluorescence microscope MF43-N



- Applications: biological slices, biological cells, bacteria; transparent or semitransparent objects, powders, etc.
- Observation methods: fluorescence, bright field, phase contrast, dark field, etc.
- Fluorescence accessories: 6-hole turntable fluorescence module design, maximum supports 5 groups of filters
- **Fluorescence light source:** high-power broad-spectrum LED light source (4 individual channels LED light source and mercury lamp are **optional**)
- Recommend used with cameras: MSX2, MSX11, MSX11-C, MSH12, MSH05, MC50-S, MS23



MF43-N FISH configuration

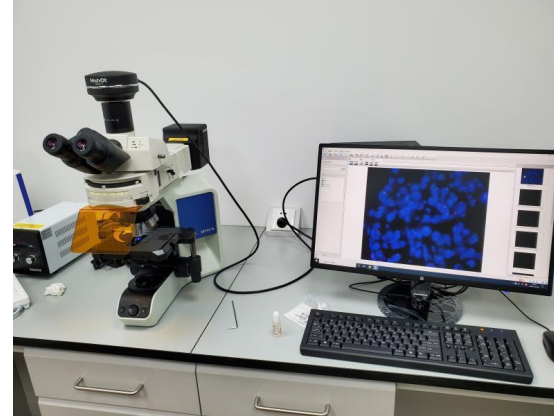
Fluorescence in situ hybridization research



MF43-N + Camera + FISH software

Features:

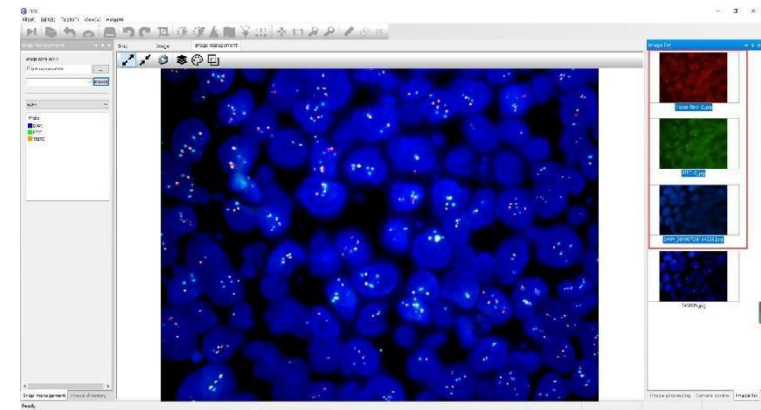
- Mercury light source and 4 individual channels LED light source are optional
- Mercury light source is good view in eyepiece
- LED light source is good for imaging on PC
- Professional FISH imaging software without Karyotyping
- Good reproducibility and no fluorescence shifting
- Various groups of probes for choice.



Mercury



LED

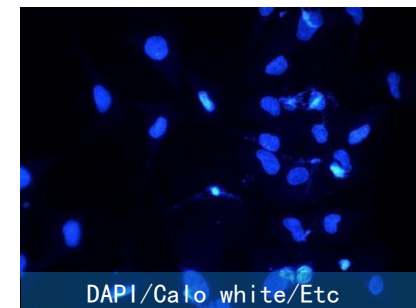
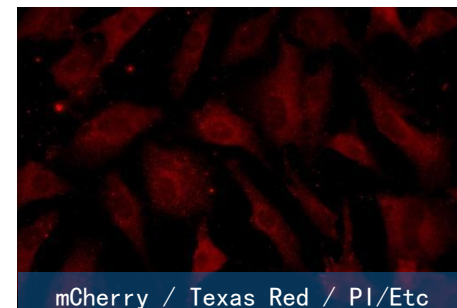
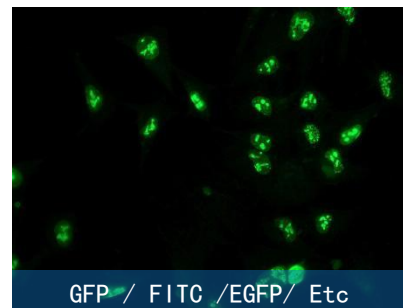


— Image from pathology department in hospital —

MF43-N cost effective fluorescence configuration



- Suitable applications: Immunofluorescence, biological fluorescence, common fluorophores stained glass slide, etc.
- Observation method: Fluorescence and bright field
- Fluorescence attachment: **Single/Two/Three/Four channels** fluorescence groups
- Fluorescence light source: 3W, 5W LED
- **Featured** function: Show and remember each channel light intensity
- Optional wavelength: Main peak of excitation **330nm~625nm**



(Basic) Biological microscopes ML31
Education, clinic, biology



- Application range: routine fields such as pathology, clinic, inspection, tissue biology, etc.
- 0/100 light division
- Field of view 22mm
- One step upgrade to fluorescence functions with MSHOT LED fluorescence attachment
- Recommend used with cameras: MS60/MSX1/MDX10/MSX2/MD28-W



Photos take at school lab and hospital

ML31 expand solutions

The diagram illustrates the MshOt ML31 microscope and its expandable capabilities. At the center is the main microscope unit. Four upgrade options are shown around it, each with a representative image and a label:

- Upgradable fluorescence observation:** Shown with two small rectangular units and a circular inset image of blue fluorescent structures.
- Upgradable Phase Contrast Observation:** Shown with a large black circular unit and a circular inset image of phase-contrast micrographs.
- Polarized observation can be upgraded:** Shown with a smaller microscope unit and a circular inset image of a pink-stained biological specimen.
- Upgradable dark field observation:** Shown with a black circular unit and a circular inset image of bright, colorful particles on a dark background.

(Basic) Upright fluorescence microscope MF31
Immunofluorescence, education

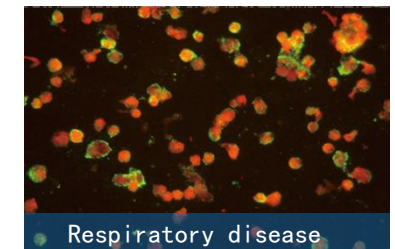
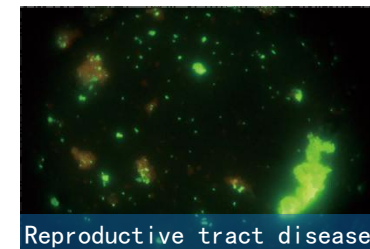


Single channel



Multi channels

- Application range: tissue slices, biological cells; detection of fungi/tuberculosis/gynecology/respiratory tract/reproductive tract, etc.
- Observation methods: fluorescence, bright field
- Compact fluorescence attachment in LED light source, single channel and multi-channels (maximum 4 channels)
- Digital screen show and remember each channel light intensity
- Recommend to use with cameras: MS23, MS60, MSX1, MDX10, MSX2



(Simple) Biological microscopes ML11
Education, clinic, biology – Super low budget



Binocular / Trinocular

- Application range: clinic, biological tissue, etc.
- Achromatic config: achromatic objectives, 18mm eyepiece
- Infinite plan achromatic config is optional: plan achromatic objectives, 20mm eyepiece
- Recommend to use with cameras: MD50/MD50-T/MS60/MSX1/MDX10/MD28-W
- Solar power bank is optional



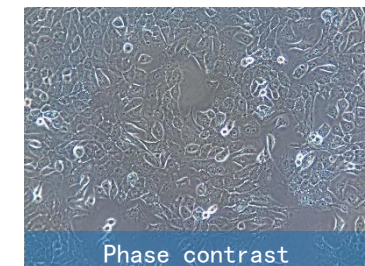
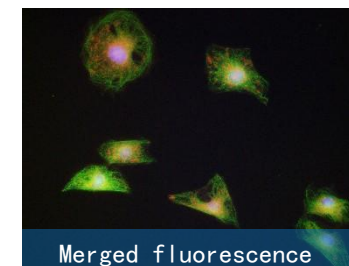
It can operate without a power supply

Featured **inverted** biological microscopes

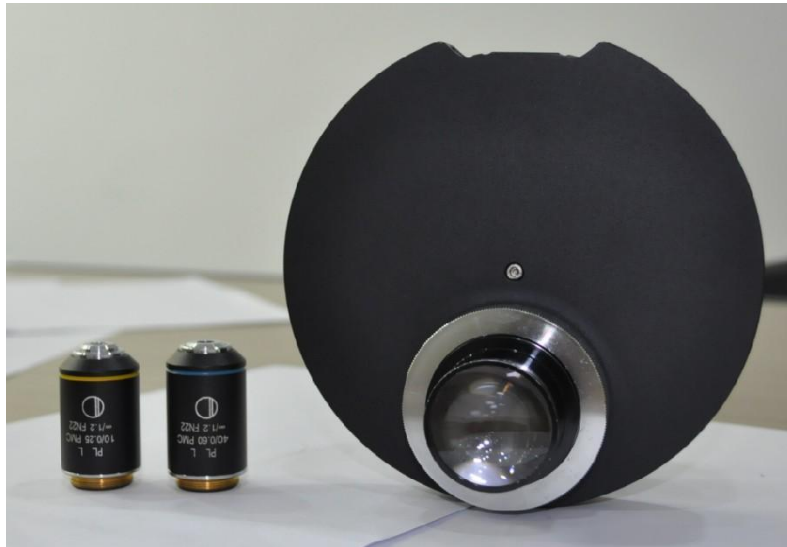
(Top) Inverted fluorescence microscope MF53-N
Research grade, sextuple fluorescence attachment



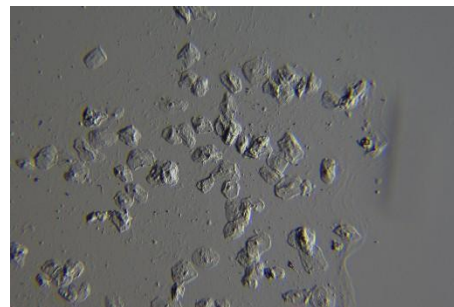
- Applications: Mainly live cells culture and transparent microorganism
- Observation methods: Fluorescence, bright field, phase contrast
- Fluorescence attachment: **Sixtuple fluorescence turnplate**
- Fluorescence light source: High power broad-spectrum LED light source/
individual channels **LED light source/mercury light soucre**
- Bright field light source: Warm LED lamp
- Recoomend camera to use with: MSX2、MSX11、MSX11-C、MSH12、MSH05、MC50-S、MS23



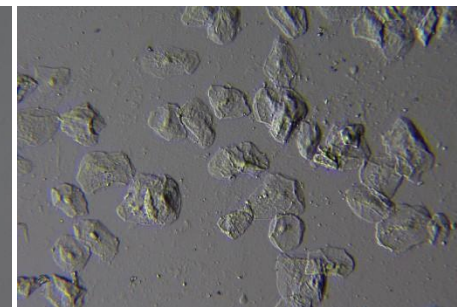
(Hoffman) Expand MF53-N microscope to hoffman



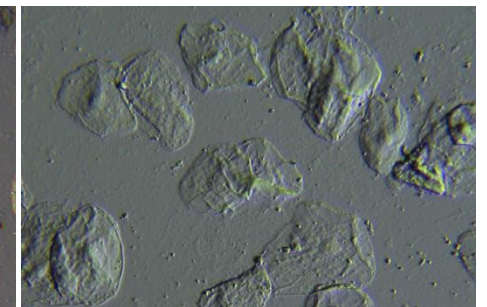
- Hoffman condenser and objectives



10X



20X



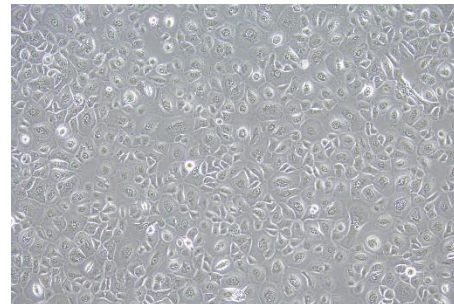
40X

(Basic) Inverted biological microscope MI52-N Stained and transparent live cells

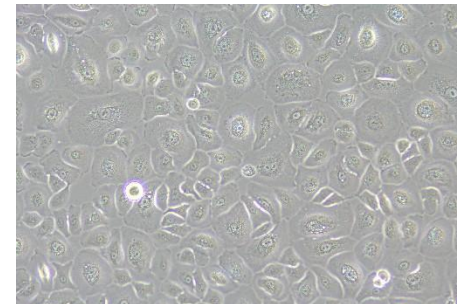


Flip-top stage
is optional

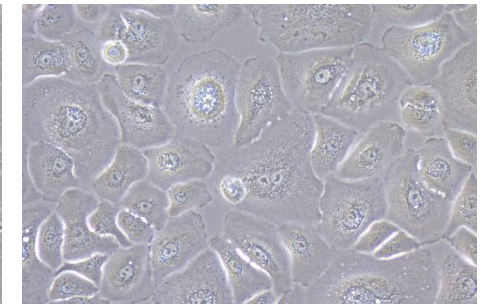
- Support bright field and phase contrast
- High contrast objectives, less light halo around the cells
- Built-in 0.75X C-mount adapter, it is compatible to all the cameras of sensor lower than 1 inch
- Flexible upgrade to fluorescence by MSHOT LED fluorescence attachment
- Recommend cameras to use with: MS60, MSX1, MDX10
- 2022 year sales qty close to 1000 sets (including fluorescence model),
- **2023 sales target is 15000 sets**



10X phase contrast



20X phase contrast



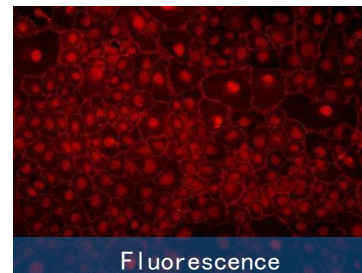
40X phase contrast

(Basic) Inverted fluorescence microscope MF52-N
Modular design is easy to use – Cost effective

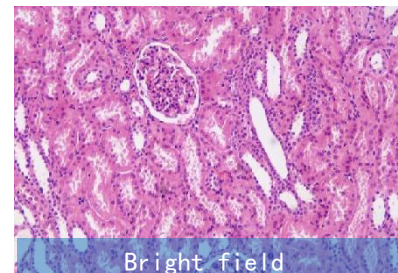


Two/Three/Four channels

- Application range: live cell and tissue slide fluorescence observation
- Observation methods: Fluorescence, bright field and phase contrast
- Standard objectives: Plan achromatic 4X, 10X, 10XPH, 20XPH, 40X
- Optional objectives: Fluorite 4X, 10X, 20X and 40X; Phase contrast-fluorescence 40X
- Built-in 0.75X C-mount adapter is compatible to all the cameras sensor size under 1 inch
- Recommend cameras to use with: MS23, MSX1, MS60, MSX2 (small shell)
- Advantages: **Fluorescence attachment in LED light source and Digital screen** to show and remember each channel light intensity. No need big table or space to use it.



Fluorescence



Bright field



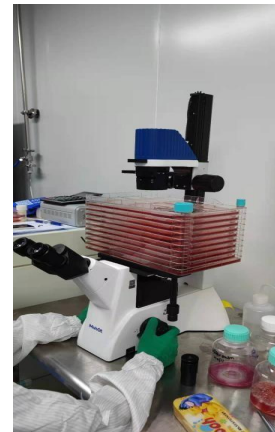
Phase contrast

Microscope for cell factory MI52-CF

Mshot



- Support bright field and phase contrast observation
- **Maximum holding 10 levels cell factory**
- Available to see the bottom two levels cell culture
- Widely used at pharmaceutical factories, vaccine manufacturers, cell culture factories



Cell factory



Cell bottle

Featured stereo microscopes

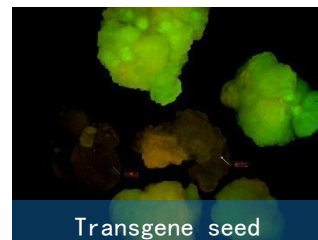
(Top fluorescence) Stereo fluorescence microscope MZX81
Modern organism (small animals) and transgene



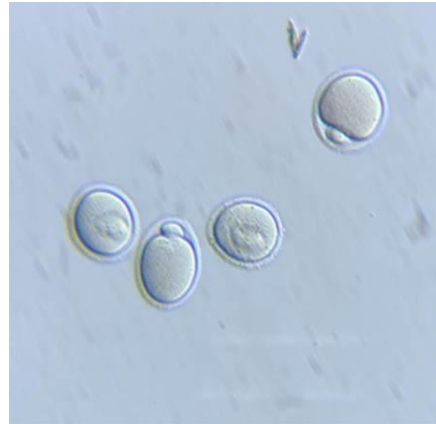
- Application range: live animal imaging, observation of model organisms (nematodes, fruit flies, zebrafish, etc.), chicken embryo identification and judicial criminal investigation, etc.
- Optical path design: Galileo optical system (LED fluorescent dual optical path lighting design)
- Fluorescent module: BG/BGV channels LED fluorescence attachment, external ultraviolet light source is optional
- Often used with cameras: MSX11, MSX2, MS23, MC50-S



Transmitted light
base is optional



(Middle) Stereo microscope MZX100
Modern organism (small animals) and transgene



- Zoom ratio 1:10
- Big basement with transmitted light (light angle changeable is optional)
- Works for IVF
- Fluorescent module: BG/BGV channels LED fluorescence attachment, external ultraviolet light source is optional
- Often used with cameras: MSX11, MSX2, MS23, MC50-S

(Basic) Stereo microscopes MZ62/MZ101

Education, medical, industry – cost effective



MZ62

Zoom ratio 6.7:1
6.7X~45X



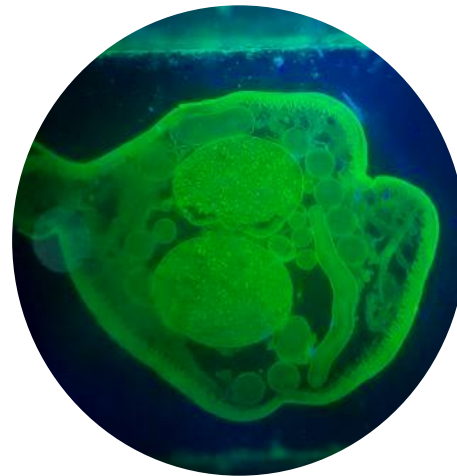
MZ101

Zoom ratio 9:1
7X~63X

- Application range: life sciences, agriculture, forestry and agriculture, materials and machinery routine scientific research fields
- The new optimized design of the optical path, the bright field effect is perfectly presented
- Up and down double LED light source lighting
- Recommend to use with cameras: MD50, MD50-T, MS60, MSX1, MDX10, MD28-W



(Expand simple fluorescence) Stereo microscopes MZ62/MZ101



- Gooseneck fiber light guide
- works for all stereo microscope

- Simple fluorescence

- B, G, UV single channels
- BG/BV/GV two channels

(Expand epi-polarizing) Stereo microscopes



• LED-305 round lamp

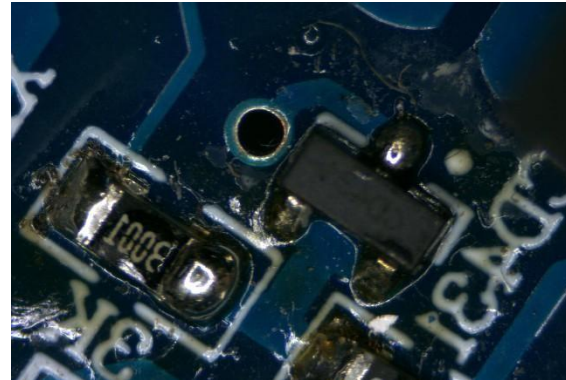


• Polarizer and analyzer

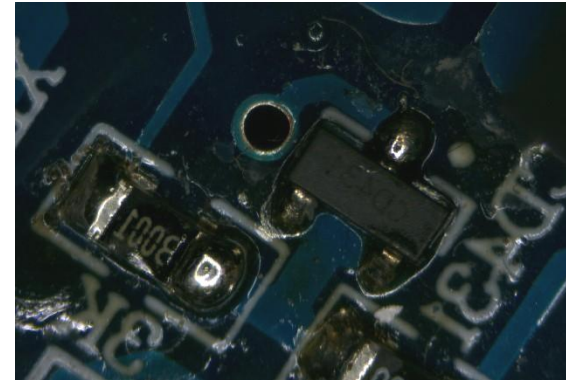
- Eliminate reflecting light
- See more details



No polarizing



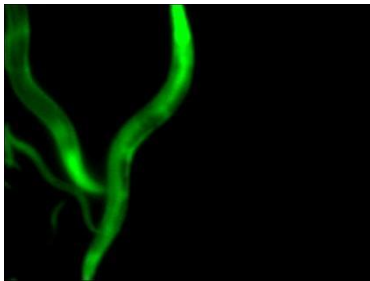
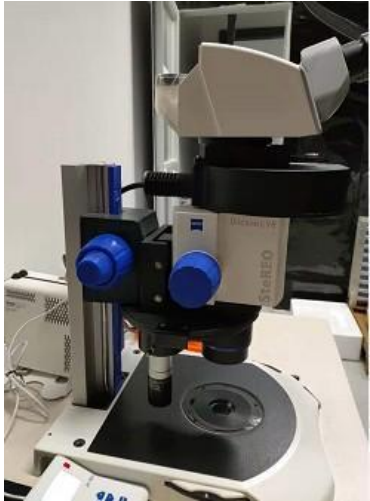
With polarizer



With polarizer and analyzer

(Specific) High magnification stereo fluorescence microscope MZX200

C. elegans



- Combination of stereo Fluorescence Microscope and Upright Fluorescence Microscope
- Stereo 1X objective and 10X objective can be rotated and switched, with a huge zoom range: 8X-560X
- The zoom body is switched synchronously with the objective to ensure that the field of view does not shift
- Switchable Optical Splitter
- LED fluorescence attachment with digital screen
- Various wave bands such as UV/V/B/G/Y are optional;
- Recommend to use with cameras: MSX2-C\MSX11-C\MSH12-C

Microscopes for industry applications

(Top) Research grade metallurgical microscope MJ43

Fluorite objectives and strong compability



- Semi-apochromatic fluorite metallurgical objective, high clarity especially 100X
- 30W epi-illuminating LED light source, brightness is adjustable
- Light management system and 5-hole coded nosepiece, remember each objective light intensity
- It is flexible upgrade to UV fluorescence
- Supports epi-illuminating and transmitted illuminating, bright field and dark field and polarizing.
- Recommend to use with cameras: MS60, MSX1, MDX10, MSX2, MC50-S



—— Metal material and fiber ——

(Basic) Metallurgical microscope MJ33/MJ31/MJ42

Ease to use, cost effective



MJ33

Bright field and dark field



MJ31

Bright field



MJ42/BD

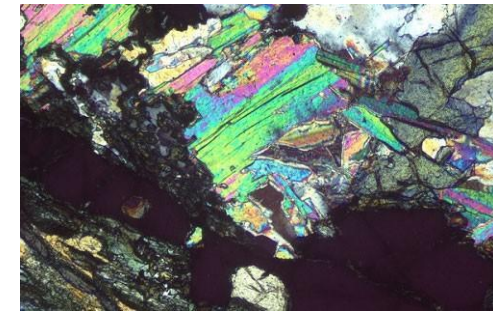
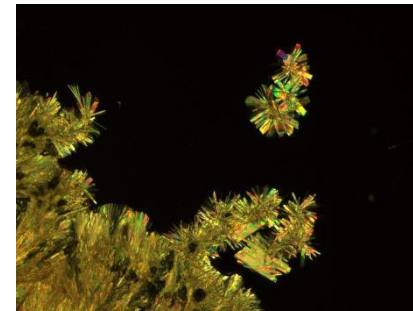
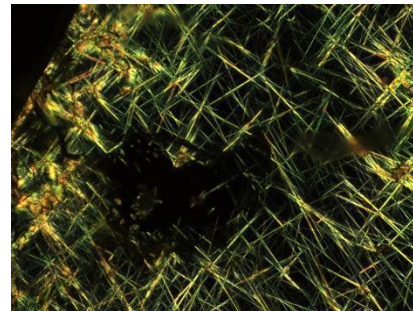
Inverted metallurgical microscope

- Application range: Inspection of various metals, alloy materials, semiconductor silicon wafers, LCD substrates, circuit boards, solid powder and other transparent or opaque industrial samples
- Built-in switchable polarized observation device, the polarizer can be rotated 360°
- Recommend to use with cameras: MD50, MD50-T, MS60, MSX1, MDX10, MSX2

(Top) Professional polarizing microscope MP41
Epi-illuminating and transmitted illuminating



- Adopting infinite optical system and modular functional design
- Configure an infinitely distant stress-free long working distance flat field objective
- Wide angle flat field eyepiece: field of view diameter Φ 22mm
- Coarse and micro motion coaxial focusing mechanism, adjustable coarse motion tension, with limit locking device, micro motion grid value: $2 \mu\text{m}$
- The polarizing observation device can be moved in or out of the optical path, and the polarizer and analyzer can rotate 360° .



Rock/Mineral/Crystal/Geology

Microscope cameras

(Fluorescence cameras) High sensitivity models



- Model: MS23**
Color / Monochrome
- 2.3MP
 - 1/1.2 inch sensor
 - Global shutter
 - 40fps /160fps
 - 380~1100nm



- Model: MC50-S**
- 5.0MP
 - 2/3 inch sensor
 - Global shutter
 - 37fps



- Model: MSX2/MSX2-C**
- 12 MP
 - 1 inch sensor
 - 15fps
 - 380~1000nm
 - Optional of cooling - 15°C



- Model: MSX11/MSX11-C**
- 21 MP
 - 4/3 inch sensor
 - 21fps
 - Optional of cooling - 15°C



- Model: MSH12-C**
- Color
 - QE 85%
 - 4.2MP
 - 1.2 inch sensor
 - 46fps

(Bright field) High cost effective models



- Model: MD50**
- 5.0MP
 - USB2.0 port
 - 1/2.5 inch sensor
 - 7fps



- Model: MD50-T**
- 5.0MP
 - USB3.0 port
 - 1/2.5 inch sensor
 - 30fps



- Model: MS60**
- 6.3 MP
 - USB3.0 port
 - 1/1.8 inch sensor
 - 72fps



- Model: MSX1**
- 10 MP
 - USB3.0 port
 - 1/1.7 inch sensor
 - 36fps



- Model: MDX10**
- 20 MP
 - USB3.0 port
 - 1 inch sensor
 - 22fps

The 3 models are workable for common fluorescence also.

(High end) Back-illuminating models



- Model: MSH05**
- Monochrome
 - 5.0MP
 - 4/3 inch sensor
 - 12.5fps
 - 380~1000nm



- Model: MSH12-BI**
- Monochrome
 - QE 95%
 - 4.2MP
 - 1.2 inch sensor
 - 22fps
 - 200~1000nm
 - Back-illuminated
 - peltier cooling



- Model: MSH20**
- Monochrome
 - QE 95%
 - 2 inch sensor
 - 24fps
 - 200~1300nm
 - Back-illuminated
 - Peltier cooling

(HDMI/WIFI/Screen) Multi-functions camera models



Model: MS80W
4K/8MP
WIFI/USB/HDMI
SD card slot

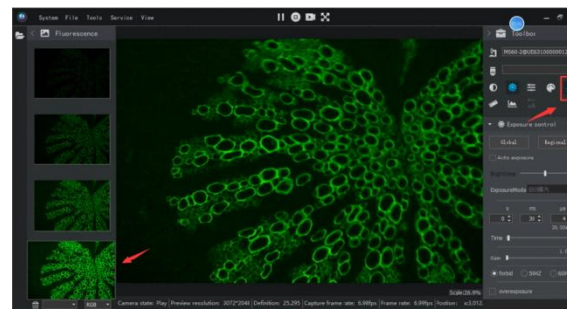
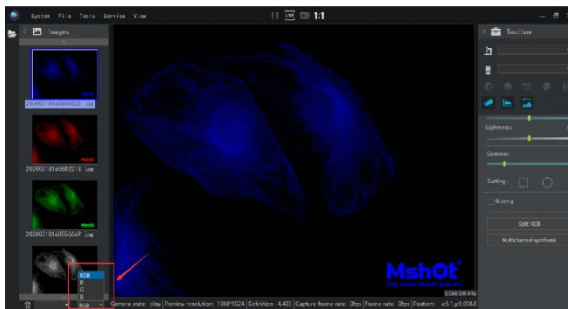
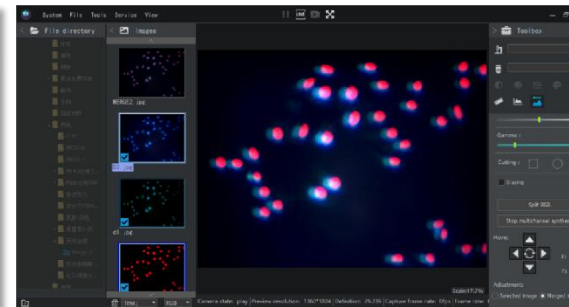
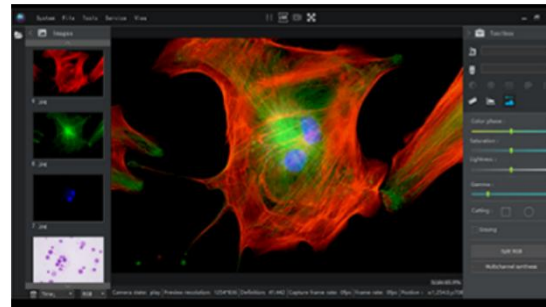
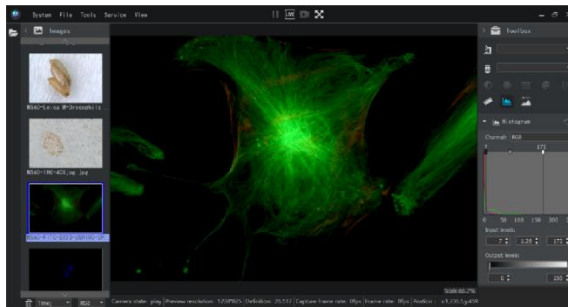


Model: MD28-W
16MP
11.6 inch touch screen
Windows 10 OS



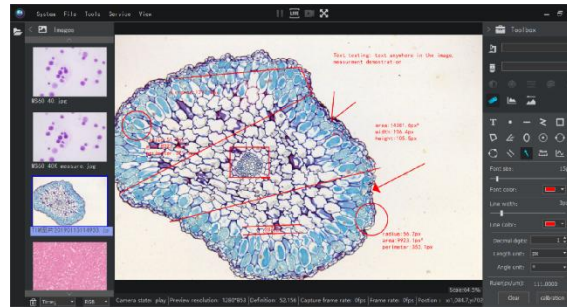
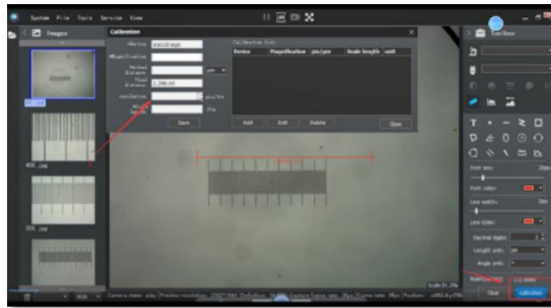
Microscope Imaging software

MSHOT Microscope Imaging Analysis V1.0



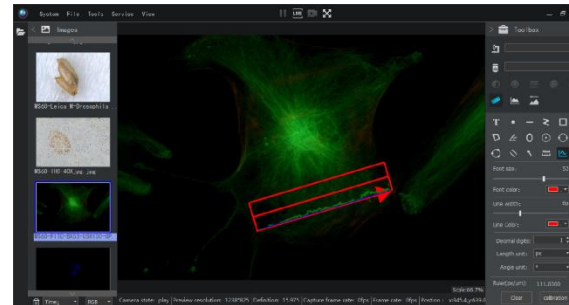
- Fluorescence**
- Histogram (get more pure image)
- Merge channels
- Split RGB
- Correct shifting
- Quicky dye
- Overlay exposure (weak fluorescence)

MSHOT Microscope Imaging Analysis V1.0

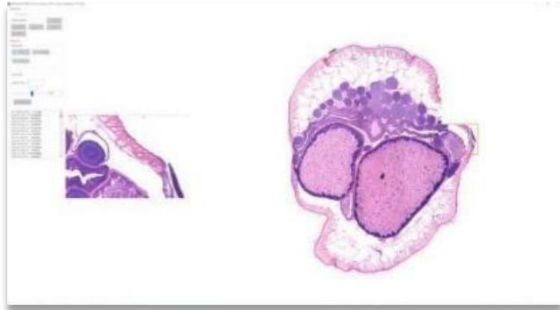


Measurement

- Calibration
- Measure in different units
- Count point
- Light intensity compare
- Text in image

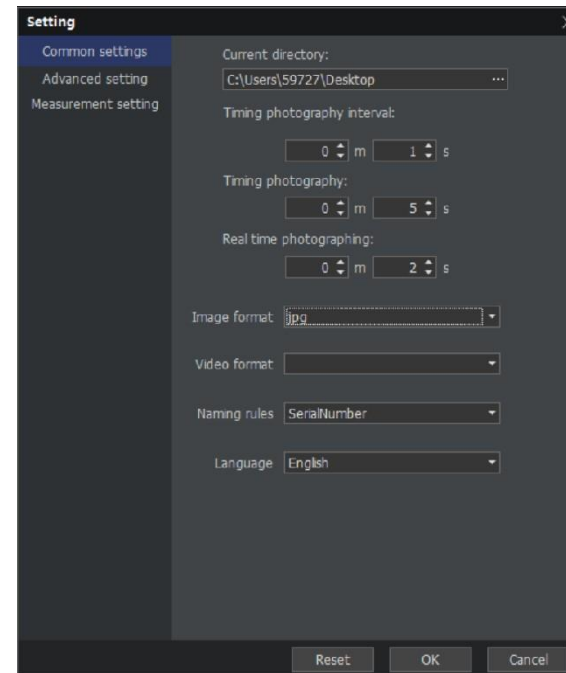


MSHOT Microscope Imaging Analysis V1.0

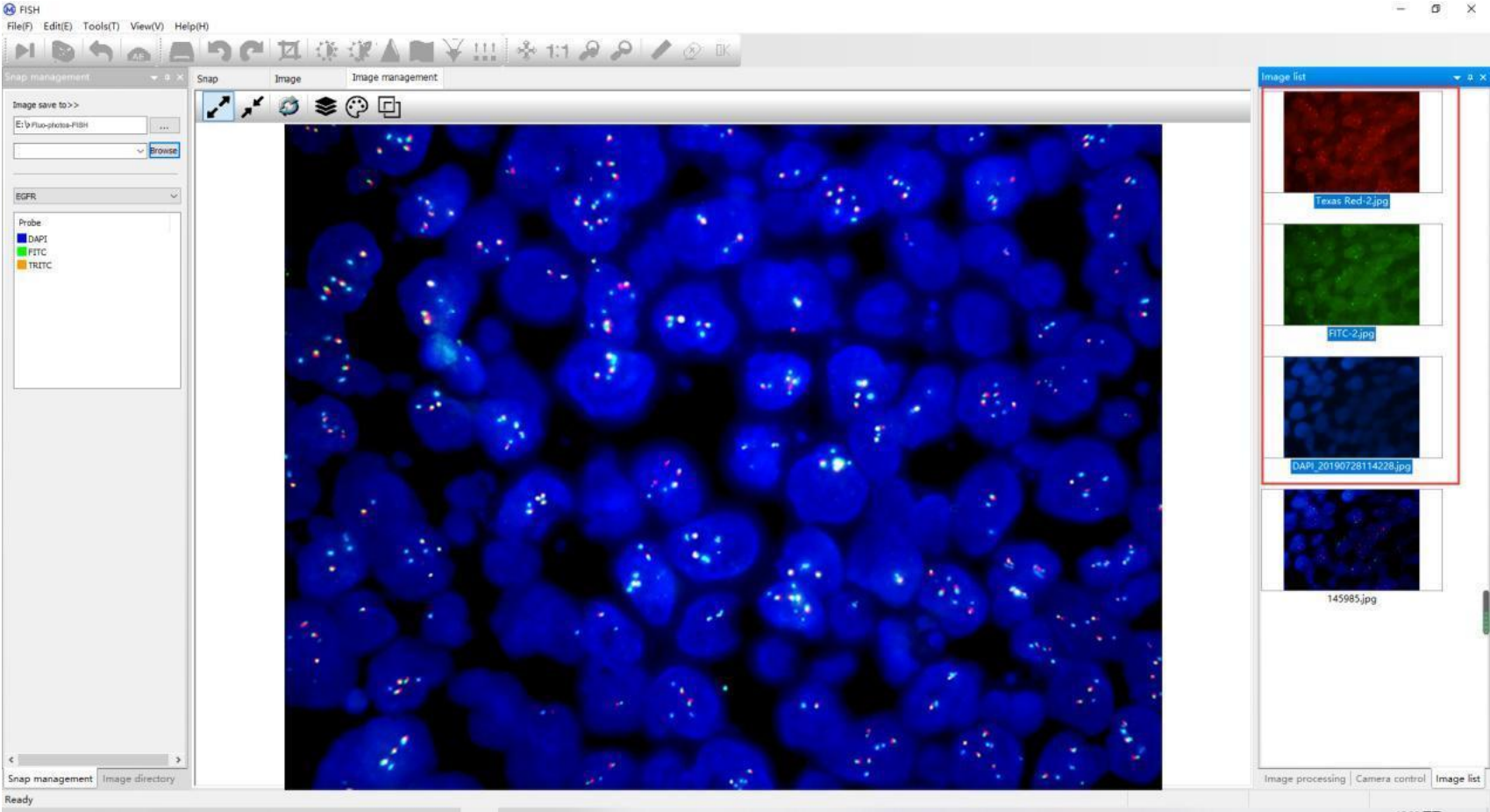


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2	로그인	admin	2018/02/28 13:24:28
3	로그인	admin	2018/02/28 13:25:36
4	로그인	admin	2018/02/28 13:26:44
5	로그인	admin	2018/02/28 13:27:52
6	로그인	admin	2018/02/28 13:29:00
7	로그인	admin	2018/02/28 13:30:08
8	로그인	admin	2018/02/28 13:31:16
9	로그인	admin	2018/02/28 13:32:24
10	로그인	admin	2018/02/28 13:33:32

Advanced functions
Auto imaging stitching
Auto extend depth of field
System login record
Set ID and password
Time interval shooting



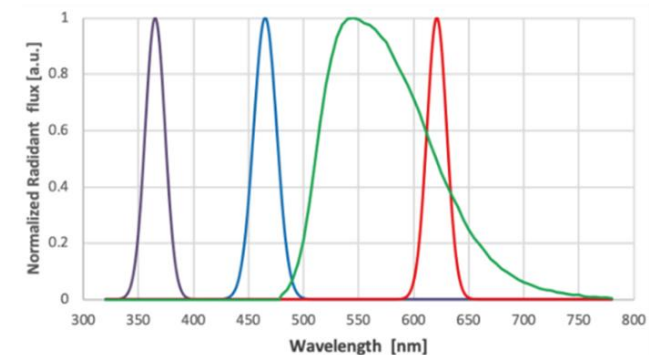
MSHOT FISH Imaging system



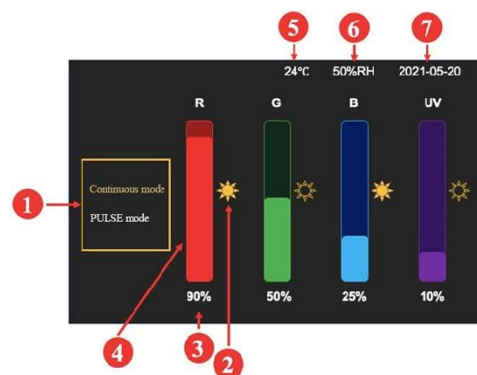
Profitable attachments

LED light sources

(4 individual channels) LED light source MG120



Fiber light guide is optional



- Supports most common used lighting wavelength 365nm/385nm/395nm; 460nm; 520nm/560nm; 625nm
- Touch screen to control each channel individually, show and remember light intensity
- LED power 70W
- Forced air cooling to avoid high temperature after long time using
- Instant on and off
- Support software trigger by TTL
- Compatible to Olympus, Nikon, Leica and Zeiss

MG120 installation photos



Olympus IX



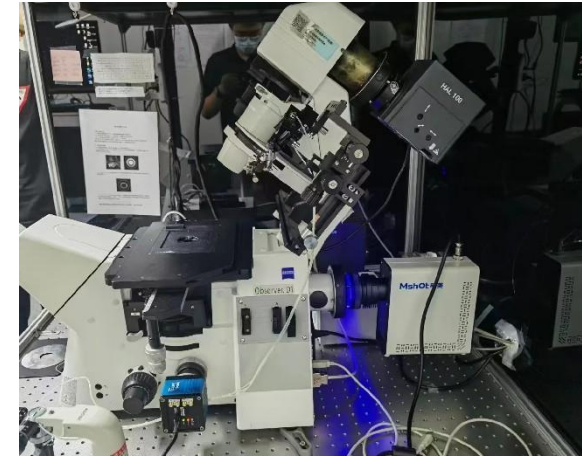
Olympus
MVX and SZX



Nikon Ti



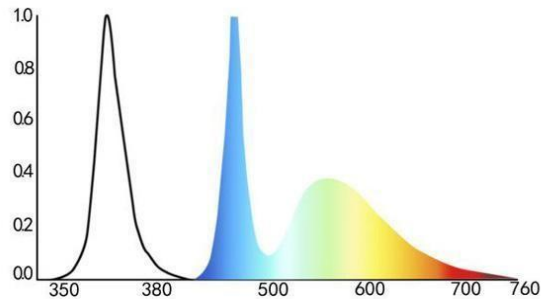
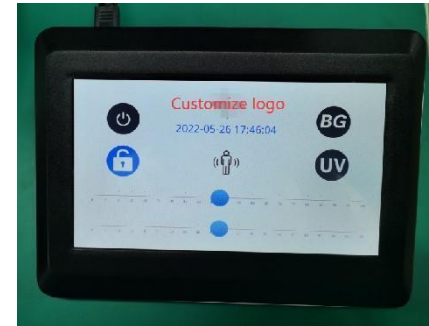
Leica DM



Zeiss Observer A1

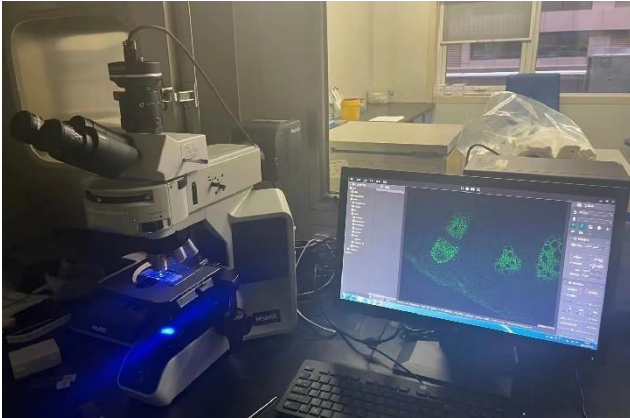
* Sunny and Nexcope are workable.

(Broad-spectrum) LED light source: MG100
Continuous wavelength lighting



- High-power LED lamp, maximum total output 100W
- No waiting, instant turn on and off
- Cool light source, less heating than mercury lamp
- UV is separately controllable, less UV radiation to human
- Know light intensity from the digital screen and real-time monitoring of the temperature of the light box
- Accept customize logo on the screen

MG100 installation photos



Olympus BX



Nikon Ti



Leica DM



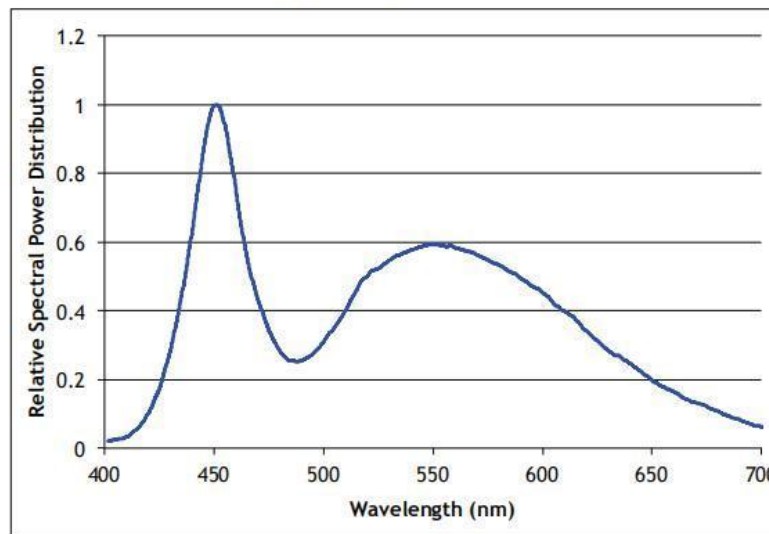
Zeiss Axiovert

* Sunny and Nexcope are workable.

(Bright field) LED light source: MG30
Also work for green fluorescence

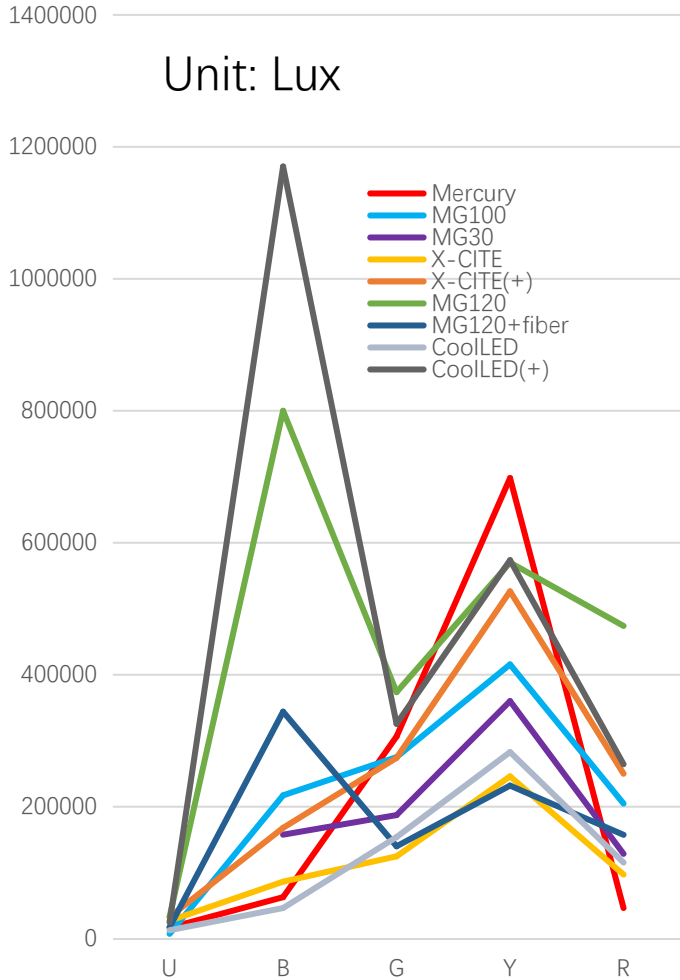


Maximum output 30W
No UV light



Comparison diagram

Channel	Mercury	MG100	MG30	X-CITE	X-CITE (+)	MG120	MG120 +fiber	CoolLED	CoolLED (+)
U	16660	7330		27200	33000	33500	17600	12800	24900
B	62900	217200	157600	86400	168000	800000	344000	46400	1170213
G	306400	275200	187300	124800	274000	373600	140000	154000	325600
Y	698000	415600	360000	246000	526400	570000	232000	282800	573600
R	46500	204800	128600	97200	250000	474000	157400	115400	264400



Light intensity

- MG120 > MG100 > MG30 > MG120+fiber (blue channel is >MG30)
- All are brighter than Xcite and CoolLED

LED fluorescence attachment

(All-in-one) LED fluorescence attachment



MF-LED: for upright microscope



MI-LED: for inverted microscope



MZX-LED: for stereo microscope

Model	Filter	Filter wavelength			Recommend Application
		Excitation	Dichroic mirror	Emission	
B	Blue	475/30nm	>505nm	510nmLP	GFP / FITC / EGFP/ Malaria diagnostic/ Alexa 488 / Cy2@ / Fluo-4 / FluorX@ / Fluoro-Jade
RB	Royal blue	420-480nm	>500nm	510nmLP	Tuberculosis Diagnostic
G	Green	530/40nm	>570nm	575nmLP	PI / EB / EH/TRITC
Y	Yellow	560/40nm	>600nm	610nmLP	mCherry / Texas Red /
U	UV	355/50nm	>410nm	420nmLP	DAPI / Hoechst 33342&33258 / AMCA/AMCA-X / Alexa 350
R	Red	620/50nm	>655nm	692/45nm	Cy5

- Filters and lamp in one unit
- 1~3 channels
- Digital screen show and remember light intensity
- 3W~5W LED each bulb



(MF-LED) LED fluorescence attachment installation photos
For upright microscope



Nikon



Olympus



Zeiss



Leica

Compatible brands and models

- Olympus: CX/BX
- Nikon: E100/E200/Ni/Ci/Si
- Leica: DM
- Zeiss: PrimoStar series/Axiolab A

(MI-LED) LED fluorescence attachment installation photos
For inverted microscope



Olympus CKX / IX



Leica DMIL



Nikon TS100

(MZX-LED) LED fluorescence attachment installation photos
For stereo microscope



Olympus



Nikon



Zeiss



Leica

Compatible brands and models

- Olympus: SZX
- Nikon: SMZ
- Leica: M
- Zeiss: Discovery V

(Insert-in type) LED fluorescence attachment
Special for Olympus CX33/CX43



Single channel model

- Blue
- Royal blue
- Green
- Yellow
- UV



Dual channel model

- Blue and Green



Reflected lighting

- White cold LED

Compatible with Olympus
CX43 and Olympus CX33



Heating stage and thermal plate

Heating stage and thermal plate

Transparent thermal plate for biological use

- Room temperature - 50 °C (± 0.3 °C precision)
- Heating speed can be controlled to meet your personalized experimental needs
- 0.5mm/0.7mm ultra thin design

Used to heat culture dishes / slides to keep object at stable temperature.

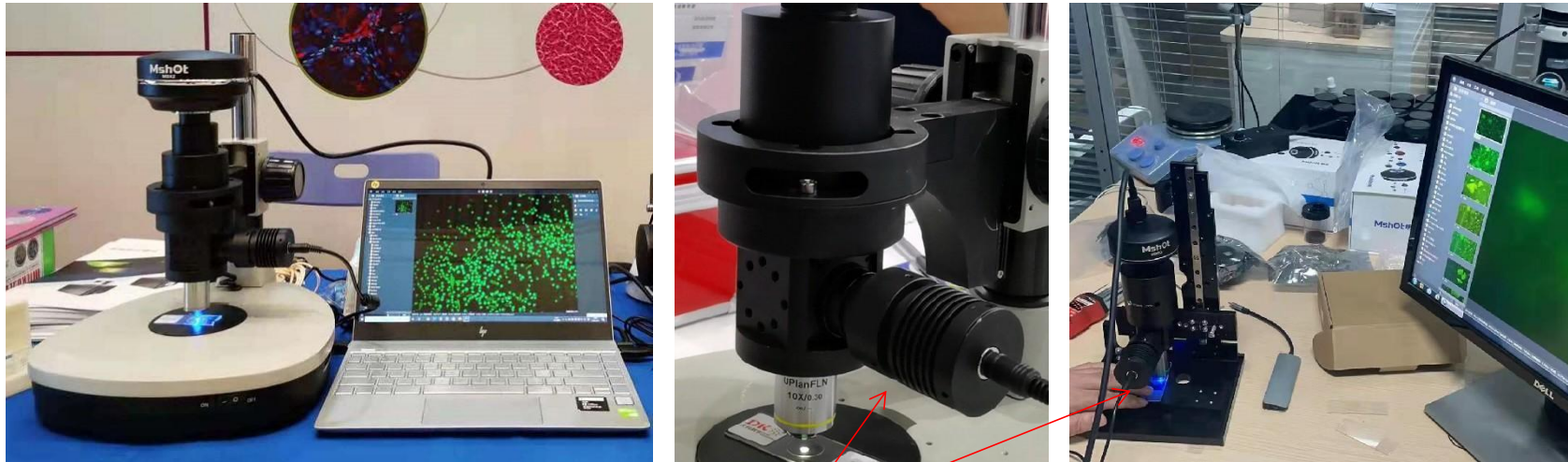


High temperature heating stage
Used for metal, crystal, ect.
Highest to 500°C



Customize solutions

Customize optical light path



Monocular fluorescence lighting supports BGU

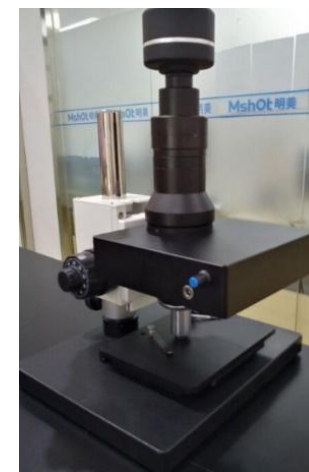
Customize optical light path



M-TV Optical tube
instead of microscope
head

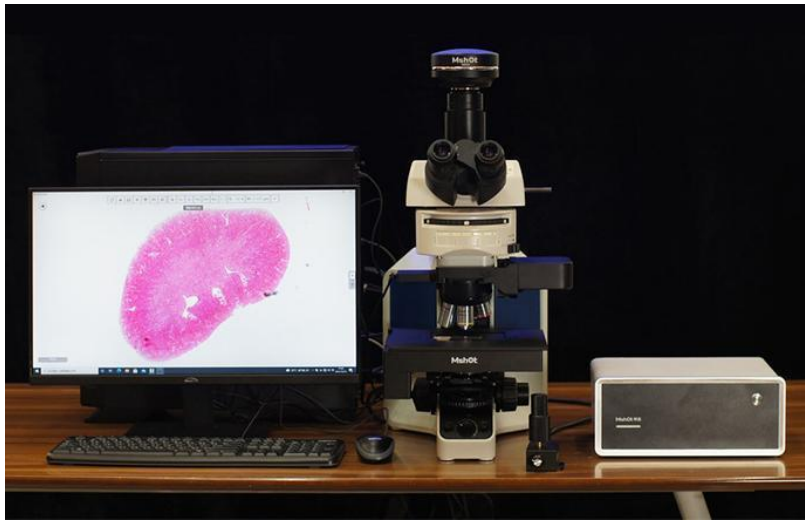


Modular fluorescence System



Under development products

Slice canning system: HE/IHC



Digital Slide Scanner MDS4

Features:

- Dual cameras, taking into account slice scanning and high resolution ROI imaging
- Independent autofocus module, retaining the manual focus function of the microscope
- High-precision three-dimensional motion translation stage, which can be controlled by electronic handwheel
- Accurate and fast full-closed-loop autofocus, automatically identify the scanning range
- Fast scanning with high frame rate, 10X scanning can be completed in as little as 40S
- Smooth image reading software, open SRP image data



- Can be upgraded to fluorescence function

Motorized inverted microscope



XYZ Motorized
Support scanning 384 well culture dishes



Confocal
Point scanning
Line scanning
Disk scanning

Motorized fluorescence attachment with light source



Auto move filter blocks and light source by control box

Liquid cooled LED light source



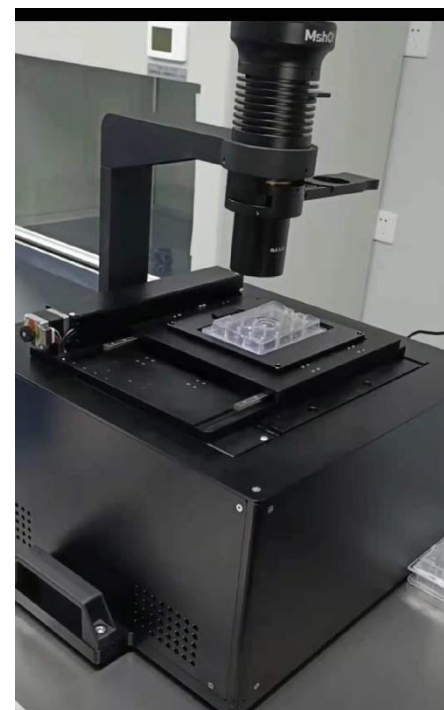
Liquid cooled LED light source
Light intensity better than mercury

Total smart live cell auto imaging system

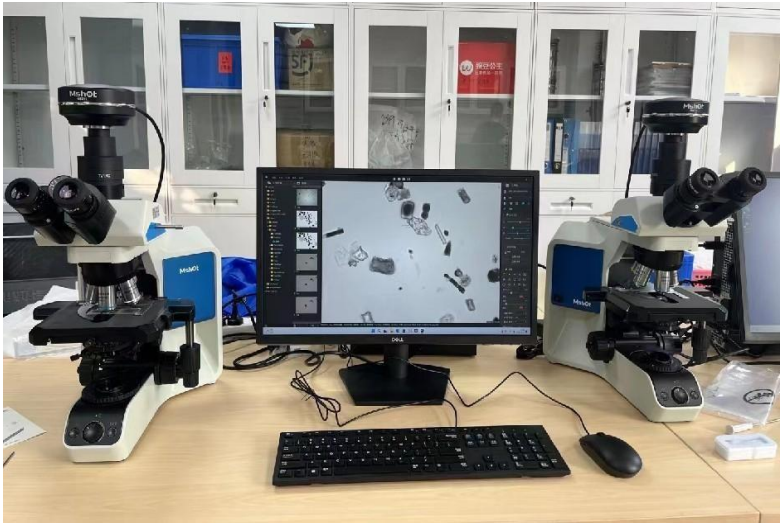
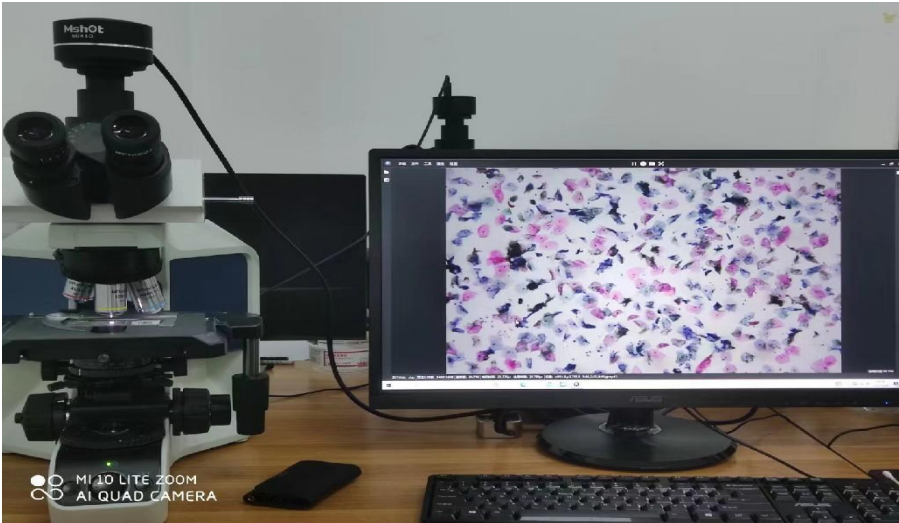
Case study: Customized transformation

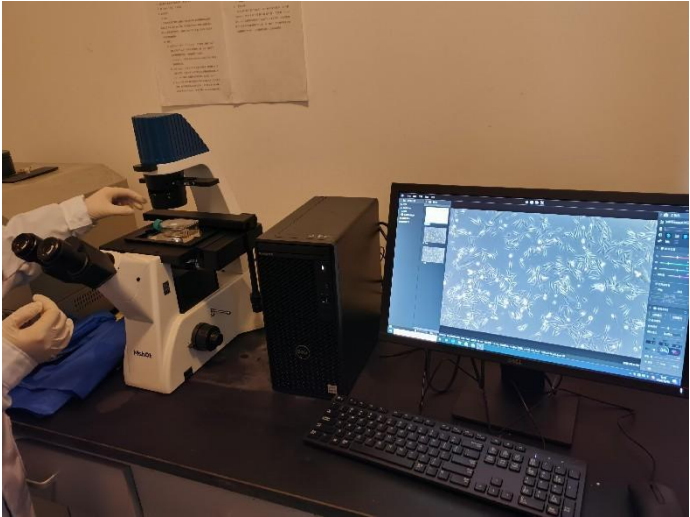
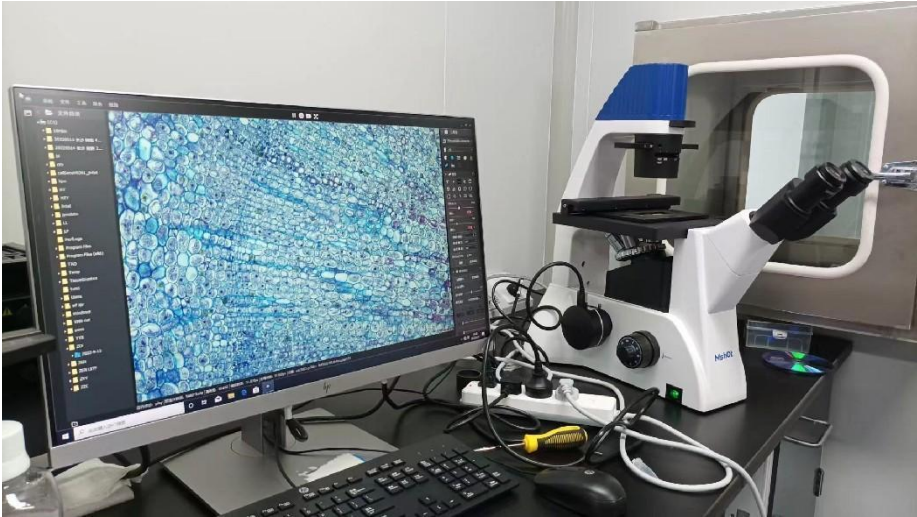


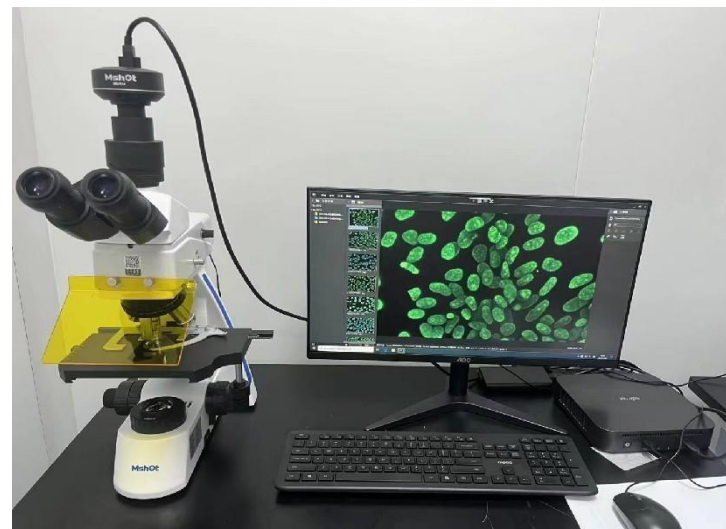
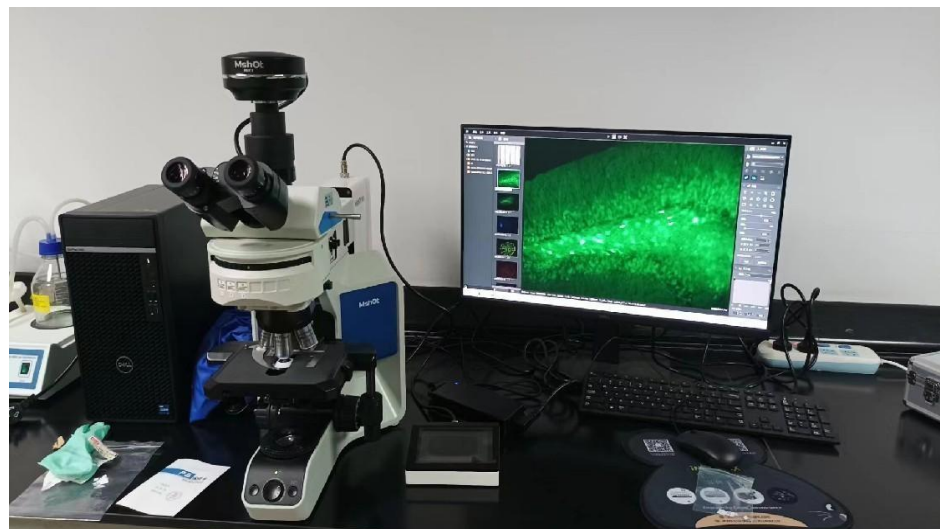
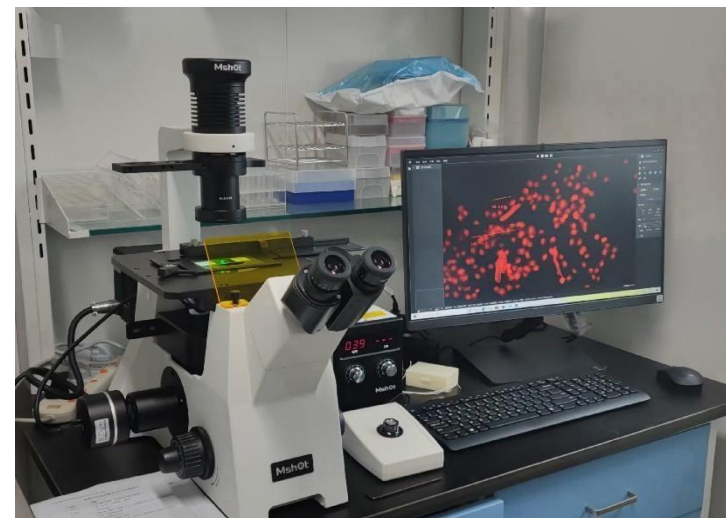
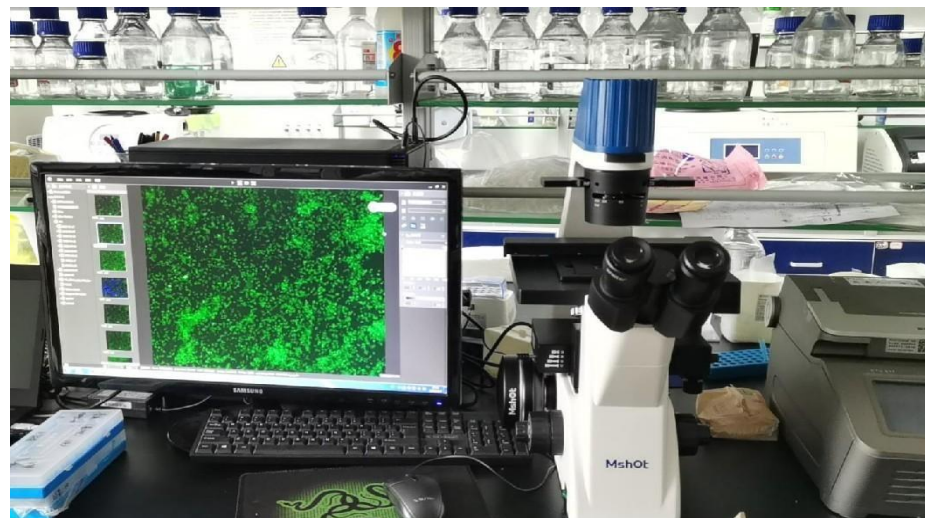
Fluorescence



Some projects photos









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