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# MAXCOPE M12.5820, M16.5820 Biological/Fluorescent Motorized Microscope

Motorized XYZ Stage + Nosepiece  
Semi-APO, BF+DF+PL+PH+FL+DIC Optional



## A12.1091

Laboratory Microscope,  
Manual



A59.2225 Cooling Digital Camera



A54.5801 XYZ Motorized Stage

## M12.5820

Motorized Laboratory  
Microscope, Semi-Auto



## M16.5820

Motorized Fluorescence  
Microscope, Semi-Auto



### A12.1091 Microscope Upgrade to Motorized Series M12.5820 and M16.5820

Intelligent revolutionary products, Operating comfort ergonomics design, Fast and efficient imaging for laboratory and clinical operation, Microscope applications has brought a revolutionary breakthrough.





## Motorized & Coded Nosepiece

Controlled by software, easily switch objectives from computer, or switch the objectives manually



## Ergo Tilting Trinocular Head Optional

Eye tube can be adjustable from  $0^{\circ}$  to  $35^{\circ}$ . Trinocular tube can be connected to SLR camera and digital camera, having a 3-position beam splitter (0:100, 100:0, 80:20), the splitter bar can be assembled on the either side according to user's requirement.



## Excellent Fluorescent Viewing

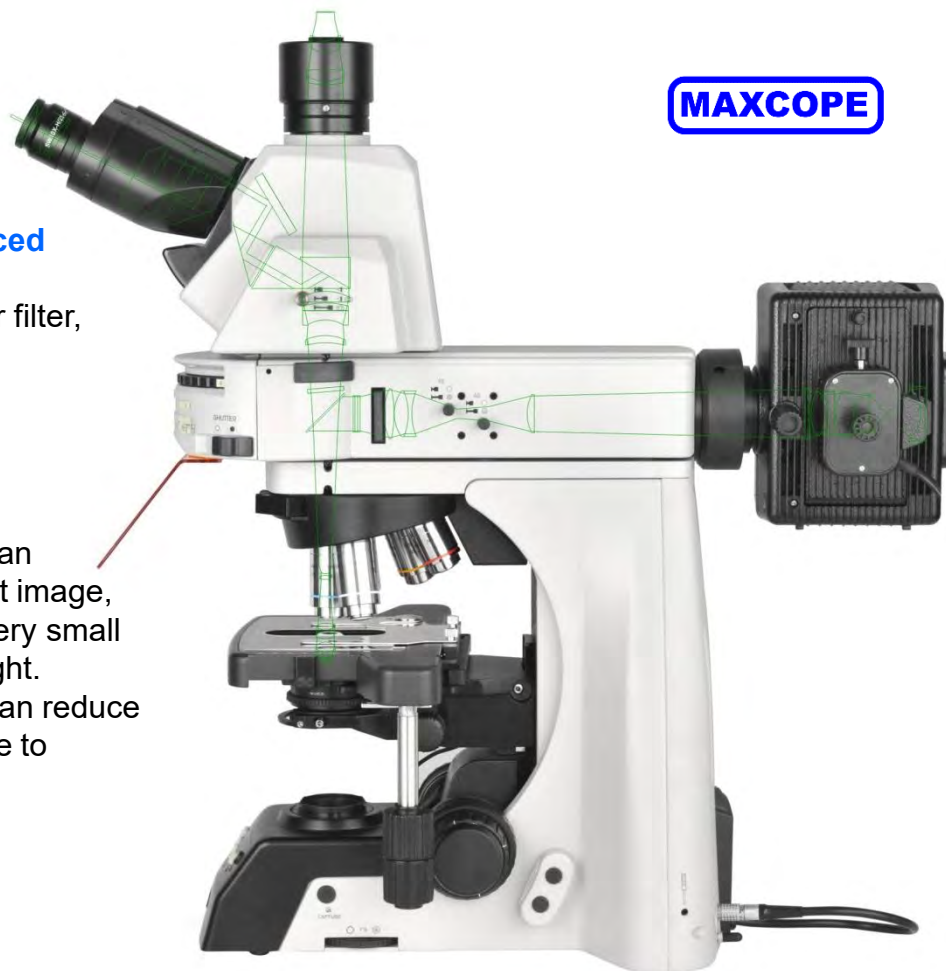
All the fluorescent filter blocks use the high-performance filter lens. The reflected light source body can assemble 6 filter blocks, that allows operators to view different stained specimens at the same time.

## Fluorescent Filter Blocks Advanced Coating Technology

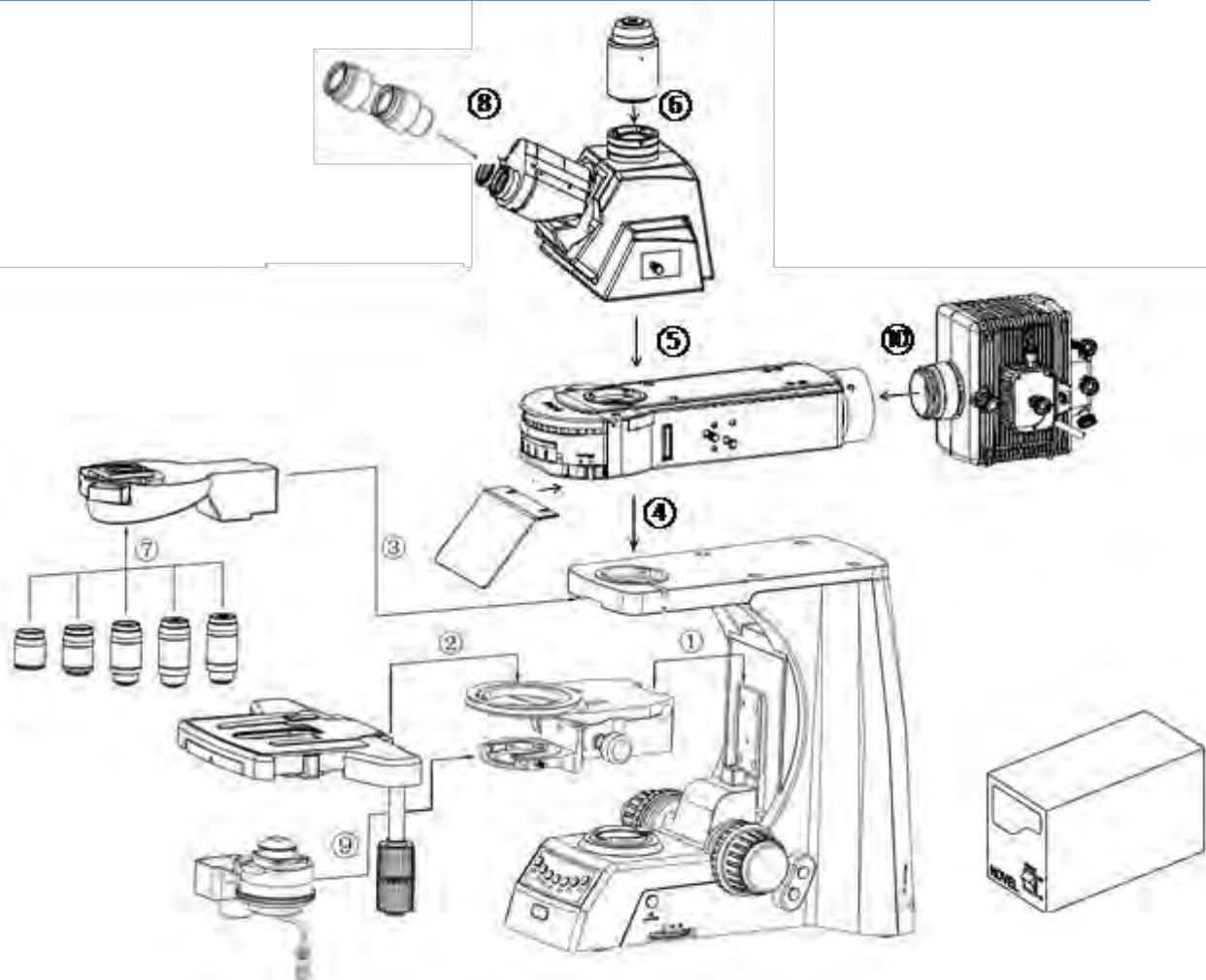
Higher transmissivity, Acuter barrier filter,  
Higher testing results

## High-Accuracy Image

High-sensitive fluorescent testing can capture the bright and high-contrast image, even in the condition of exposing very small part of the cell under the exciting light. Advanced fluorescent technology can reduce diffusion light and auto fluorescence to ensure high signal-to-noise result.



## System Diagram & Size(mm)





## N-PLN Series Plan Objectives

These plan objectives can provide flat image through the light from visible light to NIRS. They are usually used for bright-field viewing as the high signal-to-noise, high resolution and high contrast image result

## N-PLFN Series Plan Fluorescent Objectives

Owe to the multilayer coating technology, these S-APO objective can compensate the spherical aberration and the chromatic aberration from ultraviolet to infrared light. High-sensitive fluorescence ensure the acuity, articulation and color reduction of image, to provide the digital image of high-quality and high-function.

## N-PLM Series Plan PH Objectives

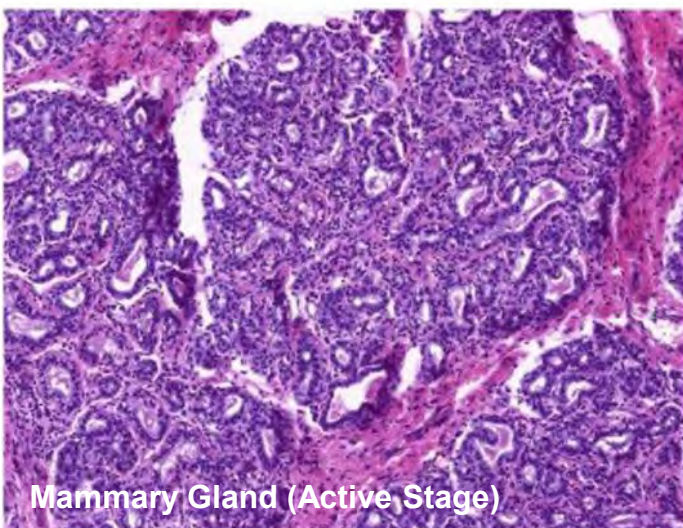
They are the good choice for clinic and scientific research. These high-quality plan objective can provide advanced plan image of 25mm FOV under bright field & transmitted light. NIS60 series plan phase contrast objectives are specially designed for phase contrast viewing.

## N-PLPN Series APO Plan Objectives

The newly-launched advanced **Apochromatic** objective lens has a high level of chromatic aberration correction capability, high resolution, and ensures a high level of wave phase aberration correction function in the full field of view. It is an ideal choice for routine laboratory observation work and digital imaging objectives.

## ◆ Bright-field Viewing

Brighter image, high resolution and flatness, suitable for all the magnifications



## ◆ Fluorescent Viewing

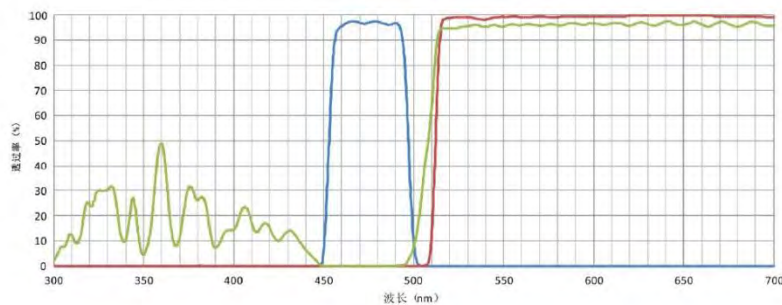
The compact epi-fluorescent components includes noise elimination feature which ensures images captured are bright, with high contrast and high signal-to-noise ratio.



**LED Epi-Fluorescent Illuminator**

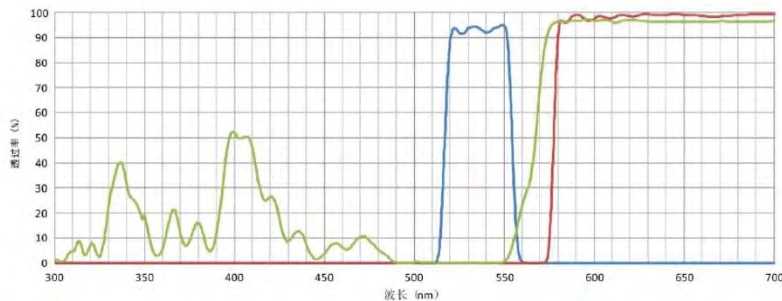


**Mercury Epi-Fluorescent Illuminator**



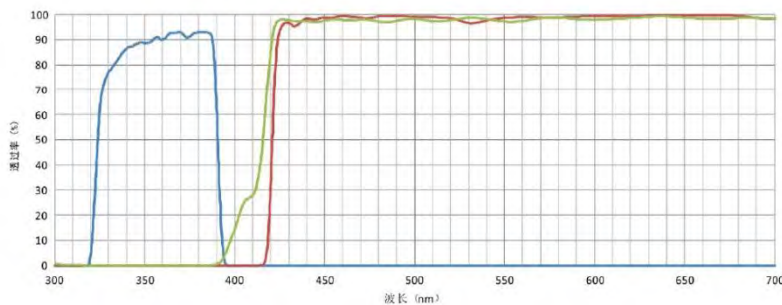
FL-B

- BP 460-495
- DM 505
- BA 510IF



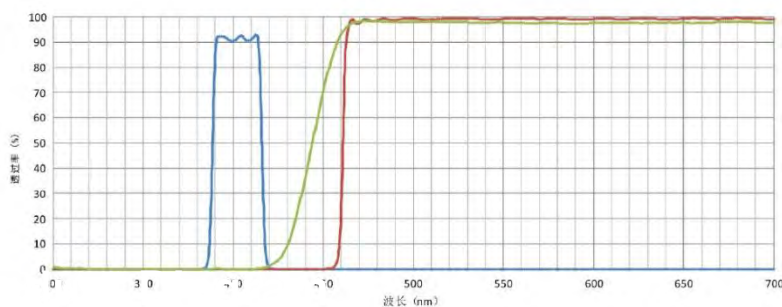
FL-G

- BP 510-550
- DM 570
- BA 575IF



FL-U

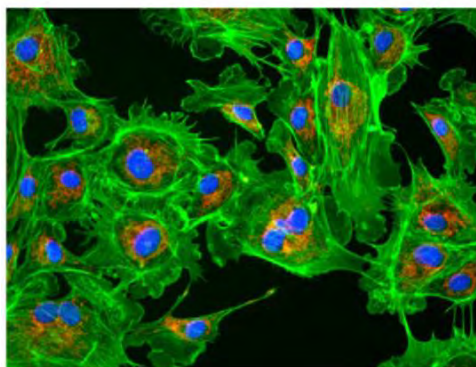
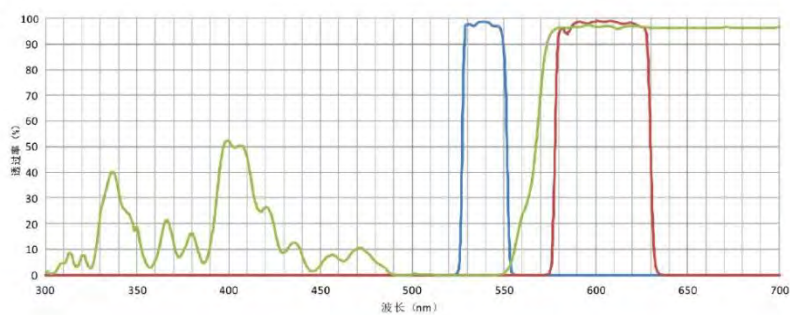
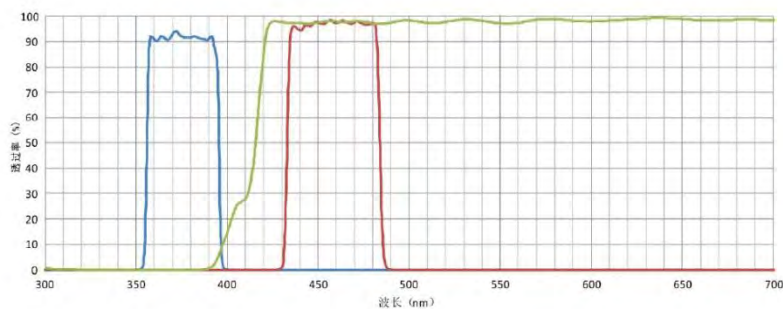
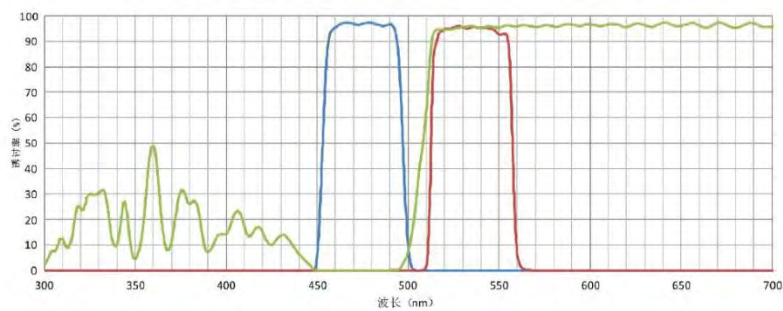
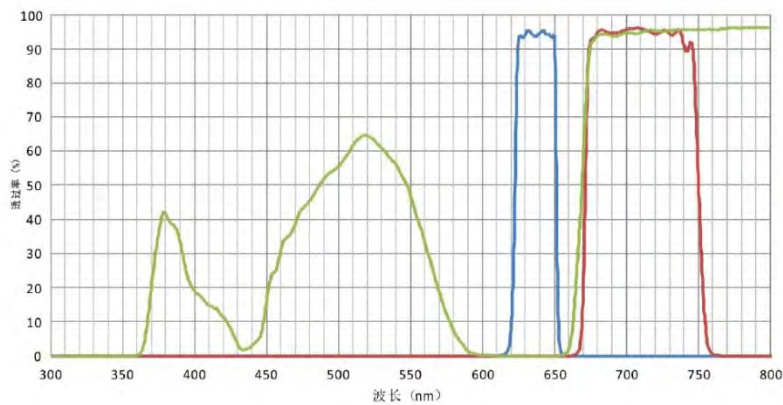
- BP 330-385
- DM 410
- BA 420IF



FL-V

- BP 400-410
- DM 455
- BA 460IF

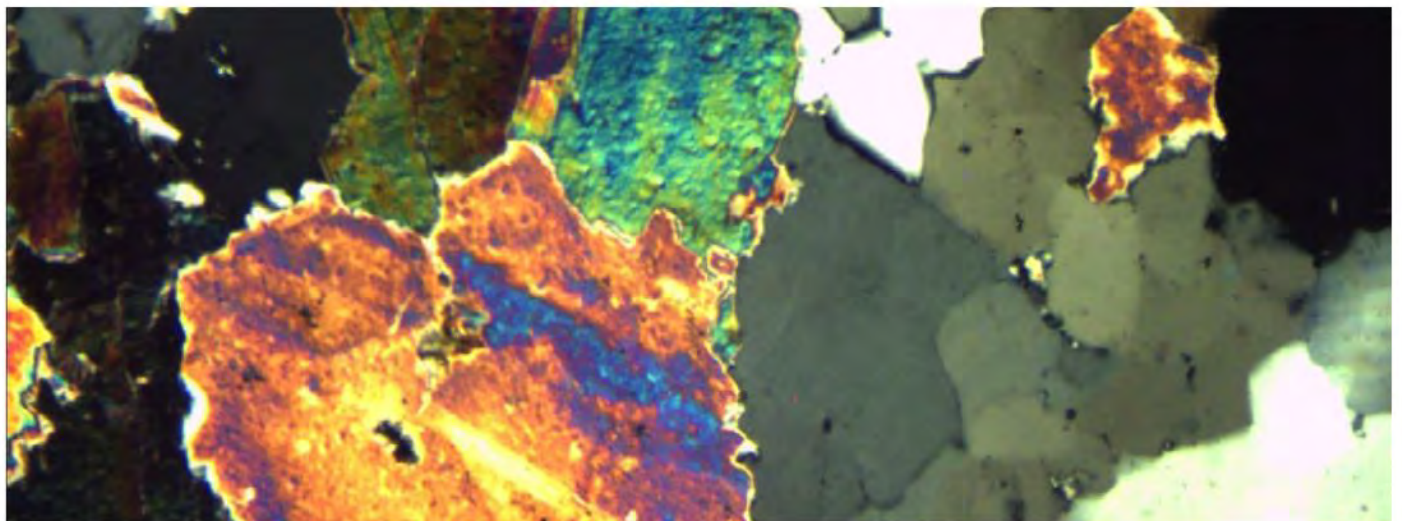
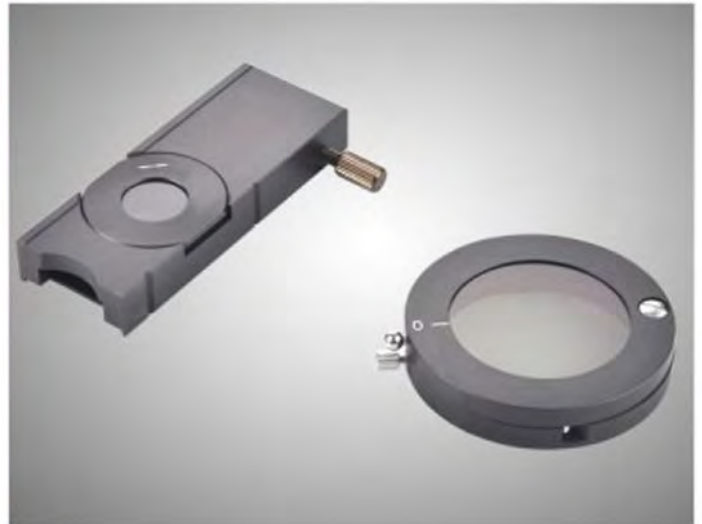
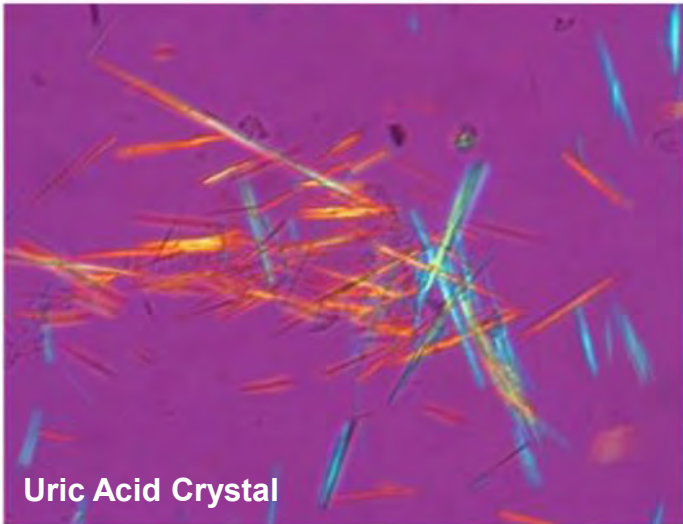




**M16.5820**

### ◆ Polarizing Viewing

It is quite suitable for viewing collagen, amyloid and crystal etc. double refracting specimen.



### ◆ Dark-field Viewing

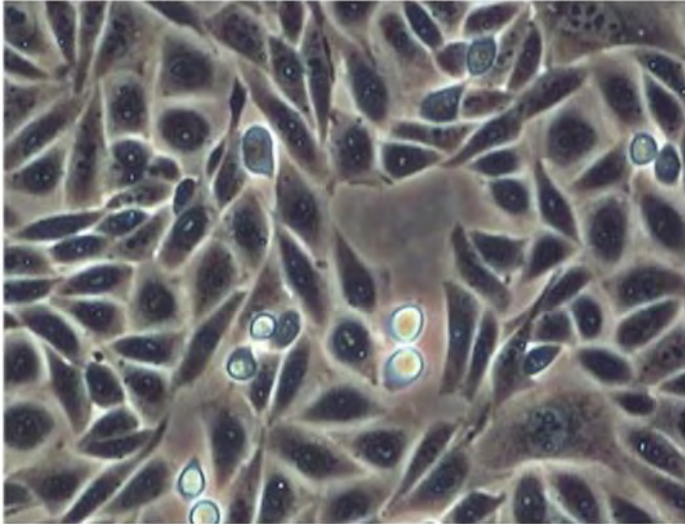
It can be used for clearly viewing of blood or flagellum etc. fine structure.





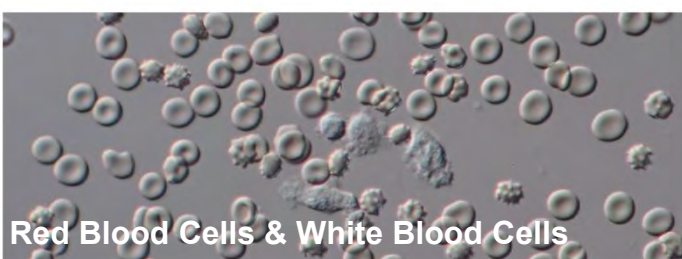
### ◆ Phase Contrast Viewing

Operators can get high contrast image of neutral background color whatever the magnifications are. It is suitable for viewing non-stained specimen.



### ◆ DIC Phase Contrast Viewing

DIC increases the contrast of the sample, and enables the nucleus and larger organelles such as mitochondria to have a strong three-dimensional effect, which is more suitable for micromanipulation. At present, it is mostly used for micromanipulation of gene injection, nuclear transfer, genetically modified animals and other bioengineering



Red Blood Cells & White Blood Cells

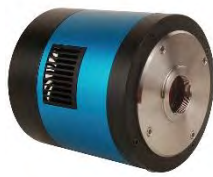


Saccharomyces Cerevisiae

## Opto-Edu Image View



A59.2225

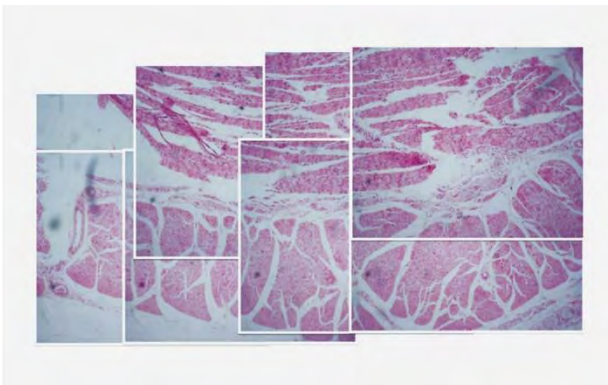


A59.2226

With high speed USB3.0 digital camera and professional image processing software, Opto-Edu microscope can work with computer to get various advanced function done easily. Real Time / Static Measure, 2D Image Scan & Stitching, 3D Depth of Field Fusion, Fluorescent Image Synthesis, Cell Counting and etc.

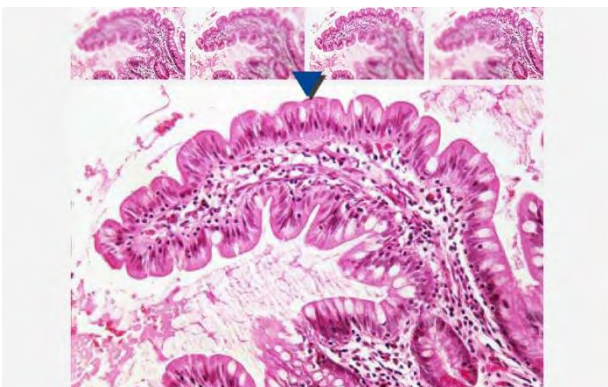
### ◆ 2D Image Scan & Stitching

By collecting and importing images in real time, the software can quickly stitch together to form a large-size and high-resolution image



### ◆ 3D Depth Of Field Fusion

Users can collect multiple images with different focal lengths by fine-tuning the focal length, and synthesize one image for output. Suitable for specimens that require a certain depth of field or poorly made sections



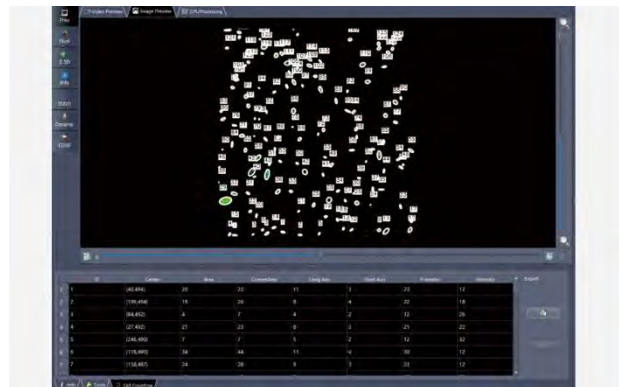
### ◆ Real Time / Static Measure

In cell observation and section observation, you need to use the measurement function. To determine the cell size, cell gap, synapse length and other data. The software can provide measurement of distance, angle, rectangle, circle, ellipse, etc.



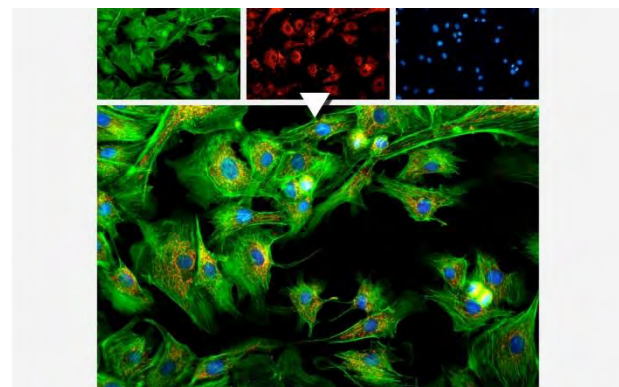
### ◆ Cell Counting

Customize cell counting requirements, automatically count and count the shape information of cells, including: size, location, volume, circumference, brightness, etc. And all data including processed images can be saved as excel sheet



### ◆ Fluorescent Image Synthesis

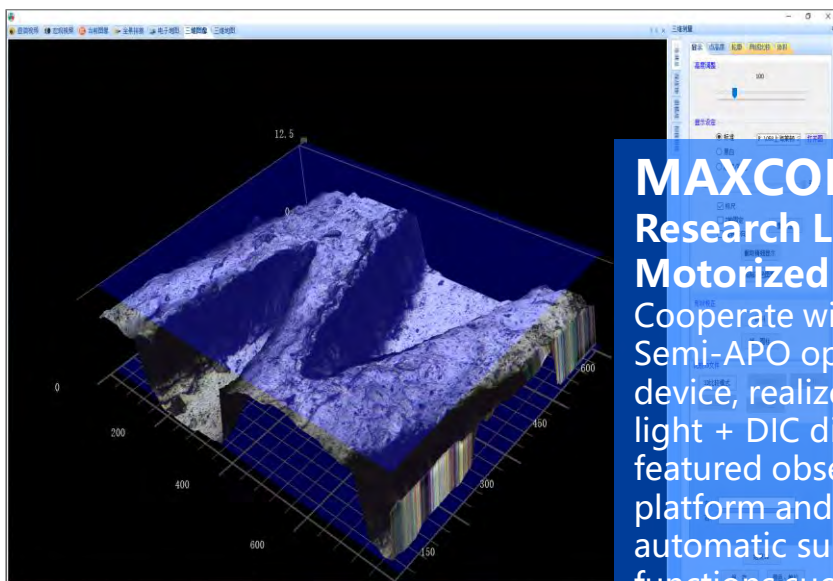
By collecting or importing images of different fluorescence channels, users can obtain images after fluorescence synthesis. For the image of each channel, the displacement in the x direction and y direction can be adjusted to achieve the fine-tuning effect







**M16.5820**

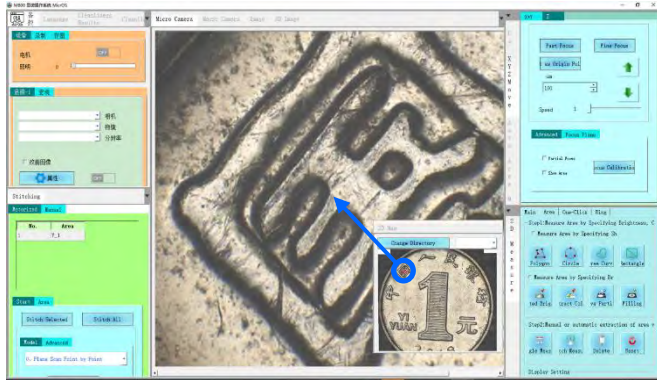


## MAXCOPE M12.5820, M16.5820 Research Level Biological & Fluorescent Motorized Microscope

Cooperate with high-quality semi-apoptotic Semi-APO optical system, and translative lighting device, realize brightfield + darkfield + polarized light + DIC differential interference contrast full-featured observation method, XYZ motorized platform and Maxcope software also provide fully automatic super software. It integrates advanced functions such as 2D/3D high-speed imaging, depth-of-field fusion, auto-focus, etc., and will be the most effective assistant in your work!

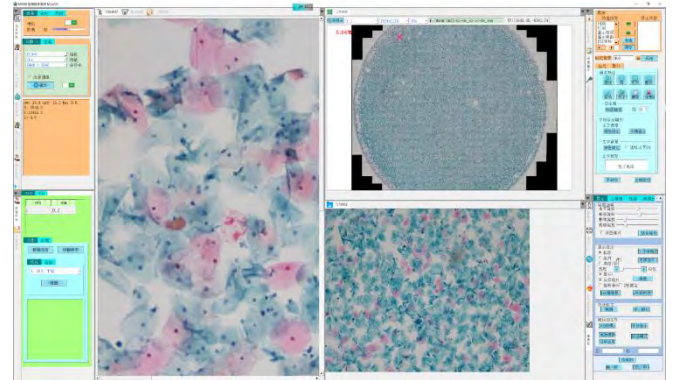
## Full Auto Microscope Scanning Software

According to surface condition of the sample and the specific requirements of customers, Maxcope has 4 versions and more customized functions provided, which are suitable for the complex automatic microscopic scanning splicing work of the motorized microscope in medical, teaching, industrial, wafer processing and other fields.



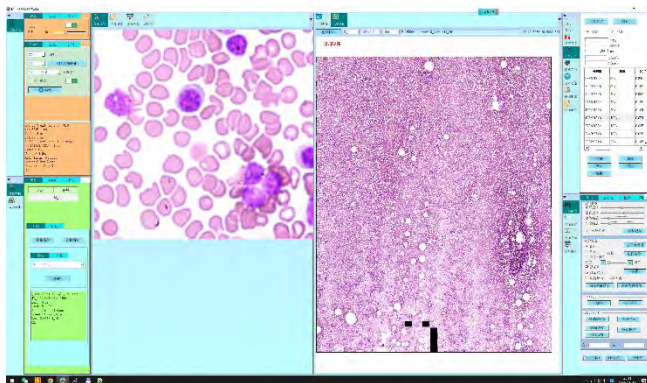
### A30.5801-2D

2D Version, Maxcope Series Standard Software  
 --Plane PXP Scan, Plane Fly Scan  
 --For XY Stage Model + 2C Computer  
 --For Plane Smooth Surface Or Low Magnification Samples, No Autofocus Needed  
 --Single Focal Plane Scan, XY Stage Direct Scan And Stitch 2D Image



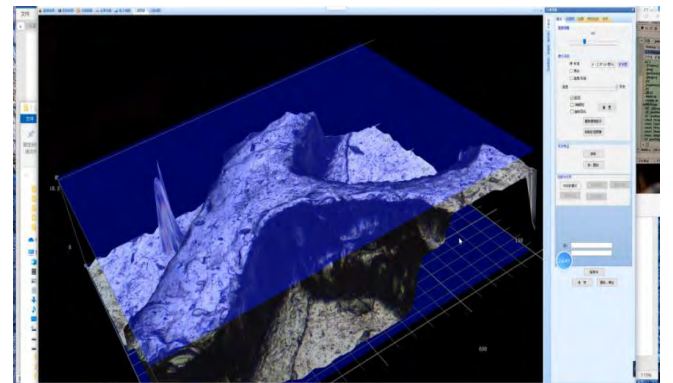
### A30.5801-2DB

2DB Version, Maxcope Series Optional Software  
 --Including All 2D Function, Add:  
 --Bevel PXP Scan, Bevel Fly Scan  
 --For XYZ Stage Model +2C Computer  
 --For Bevel Smooth Surface Or High Magnification Observation Of Thick Samples  
 --Auto Acquisition Height Of Multi-focal Planes, After Modeling, Scan And Stitch 2D Image



### A30.5801-2DF

2DF Version, Maxcope Series Optional Software  
 --Including All 2DB Function, Add:  
 --Up/Down Fast, Middle, Fine, **Fusion** Scan  
 --For XYZ Stage Model +3C Computer  
 --For Plane/Bevel/Uneven Surface  
 --Auto Focus On Multi-focal Planes, Scan And Stitch 2D Image



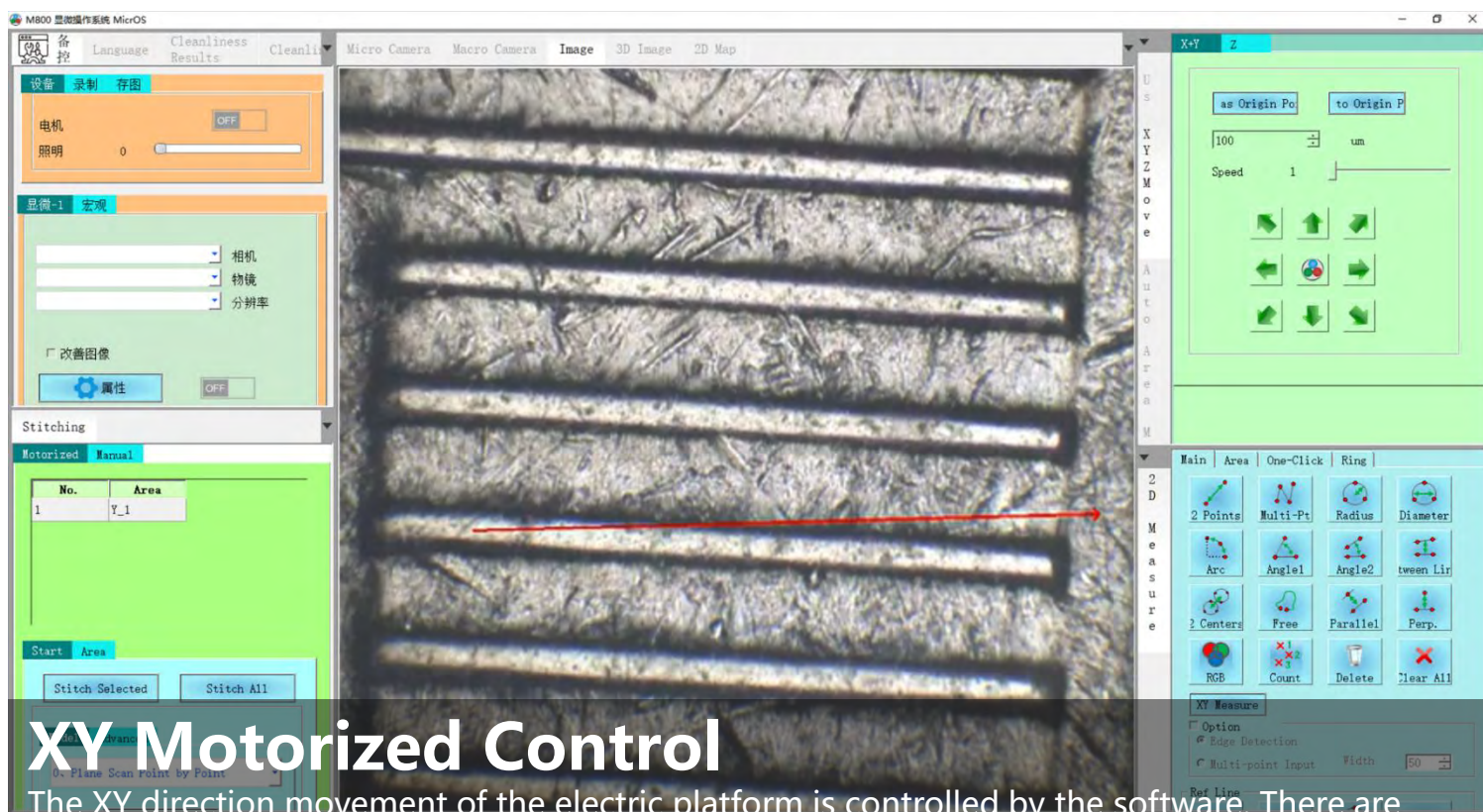
### A30.5801-3D

3D Version, Maxcope Series Optional Software  
 --Including All 2DF Function, Add:  
 --3D Scan, 3D Measure  
 --For XYZ Stage Model +3C Computer  
 --For Plane/Bevel/Uneven Surface  
 --Auto Focus On Multi-focal Planes, 3D Scanning And Stitching After Depth Fusion

## More Depth Customization Functions

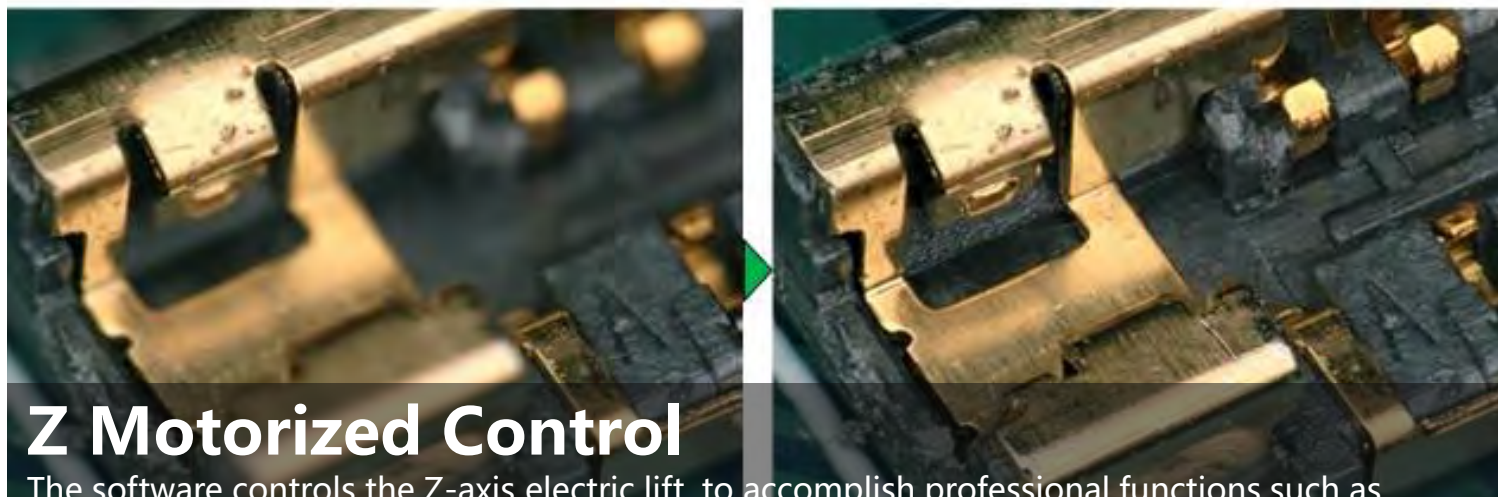
HDR Observation Function, DIC Detection Analysis, Professional Metallographic Analysis, Grain Size Analysis, Cleanliness Analysis, Hardness Tester Analysis and other customized solutions for various industries, which can be deeply customized according to the specific needs of different customers to fully meet the complex work needs





## XY Motorized Control

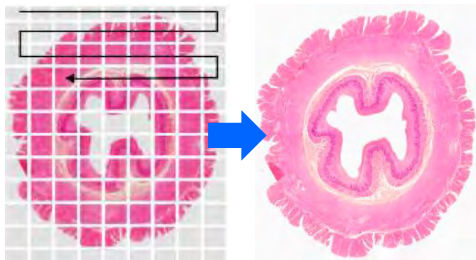
The XY direction movement of the electric platform is controlled by the software. There are various control methods. You can directly drag the window to move the platform manually, or you can double-click any point of the image, to move stage to interesting point quickly.



## Z Motorized Control

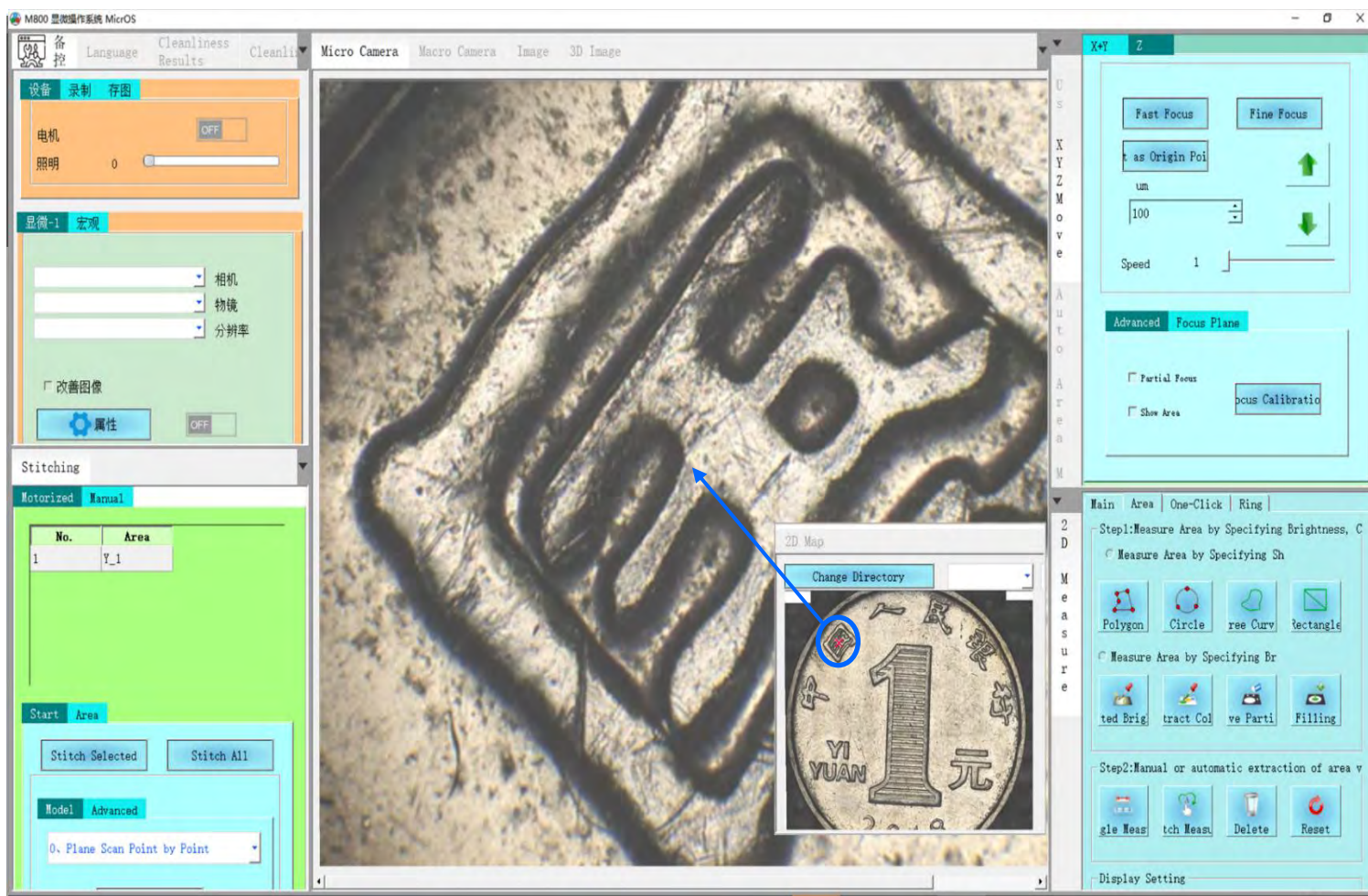
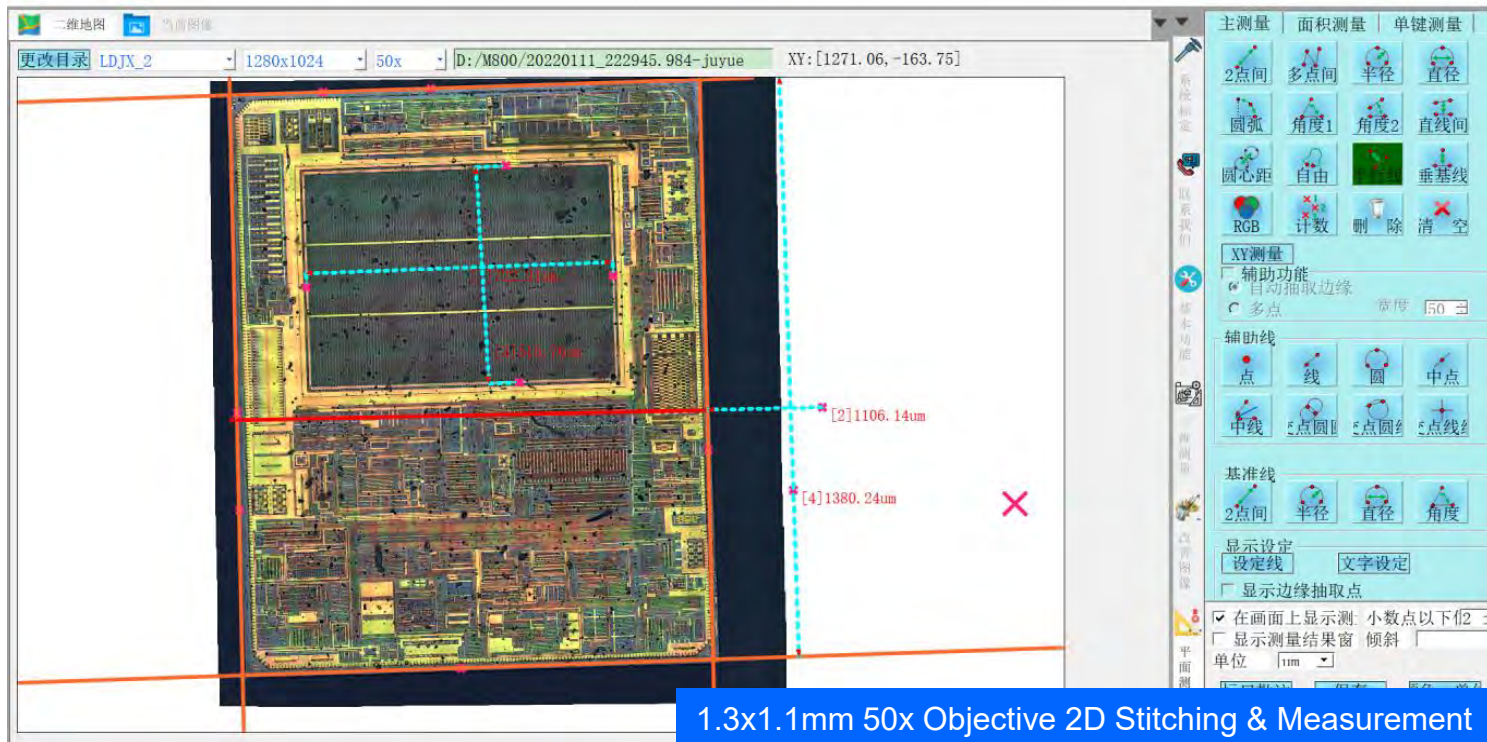
The software controls the Z-axis electric lift, to accomplish professional functions such as manual focus/auto focus/super depth of field fusion. One-button autofocus, focusing speed accuracy can be selected.



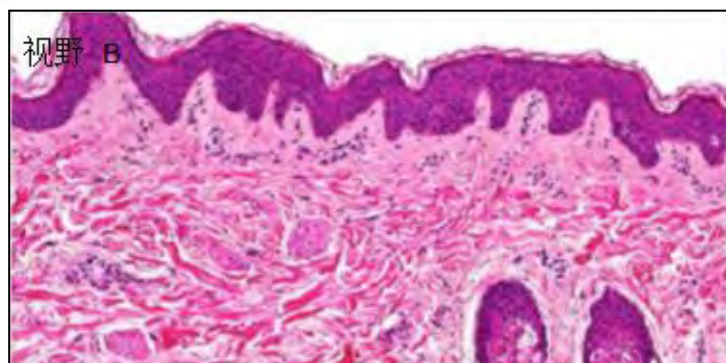
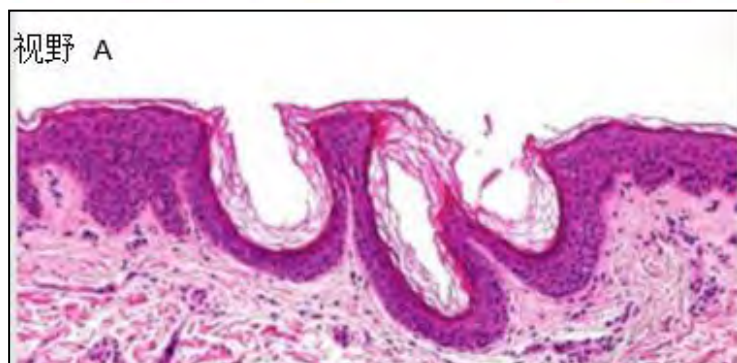
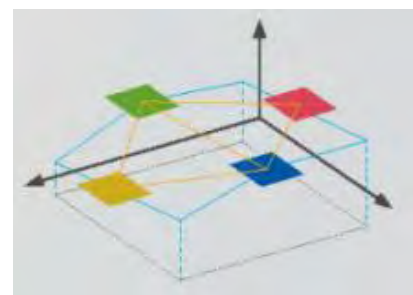


## 2D Stitching

Supports auto scanning and stitching of 2D images of any tilt plane or concave and convex surface. 2 Standard 2D Stitching Modes, 7 Advanced 2D Stitching Modes can scan & stitch at different scanning accuracy and speed as your need.

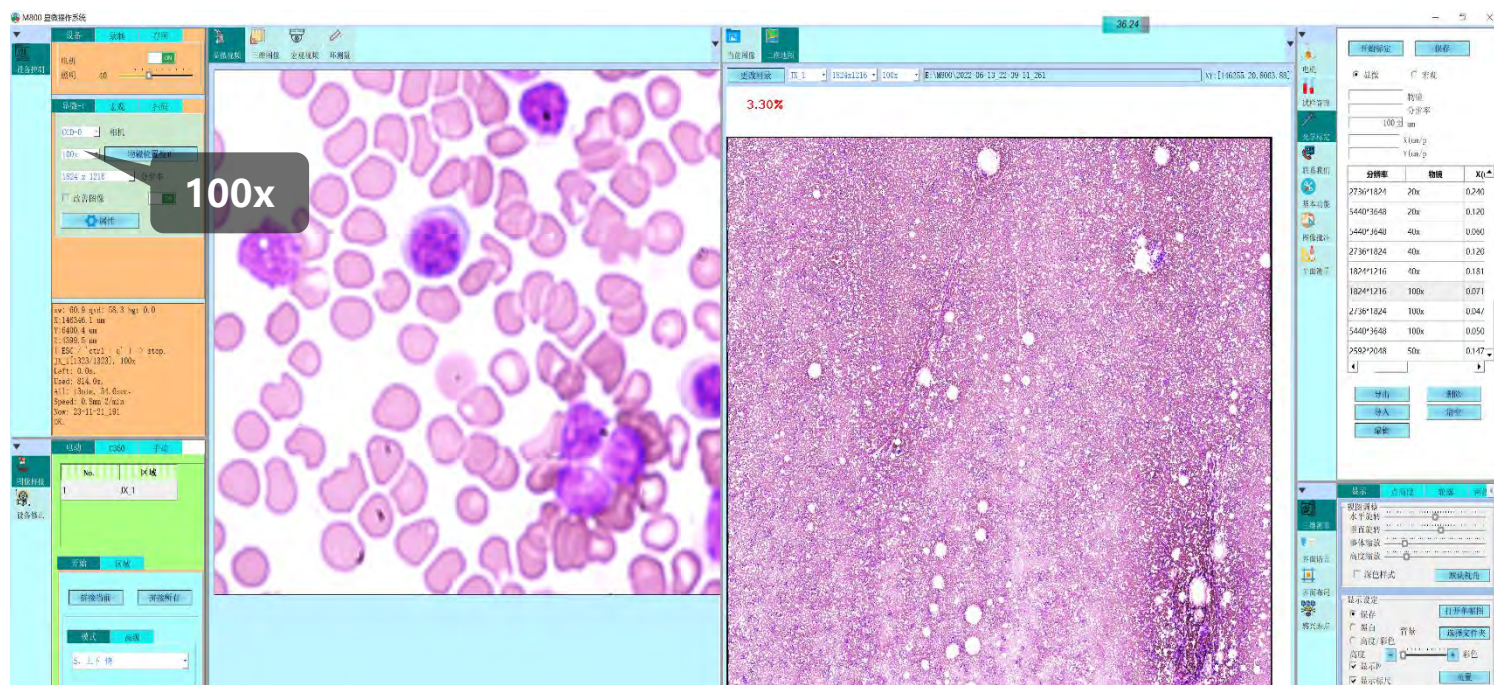






## High Speed – Fly Scan Mode

After setting the scanning range of bevel or uneven surface, the software will automatically select 9 acquisition points, automatically focus and record the height respectively, and establish a height model. Then fly scan can move Z axis according to height model and take photos quickly and stitch 2D panoramic scan images at high speed.



## High Resolution – Scan Under 40x, 100x

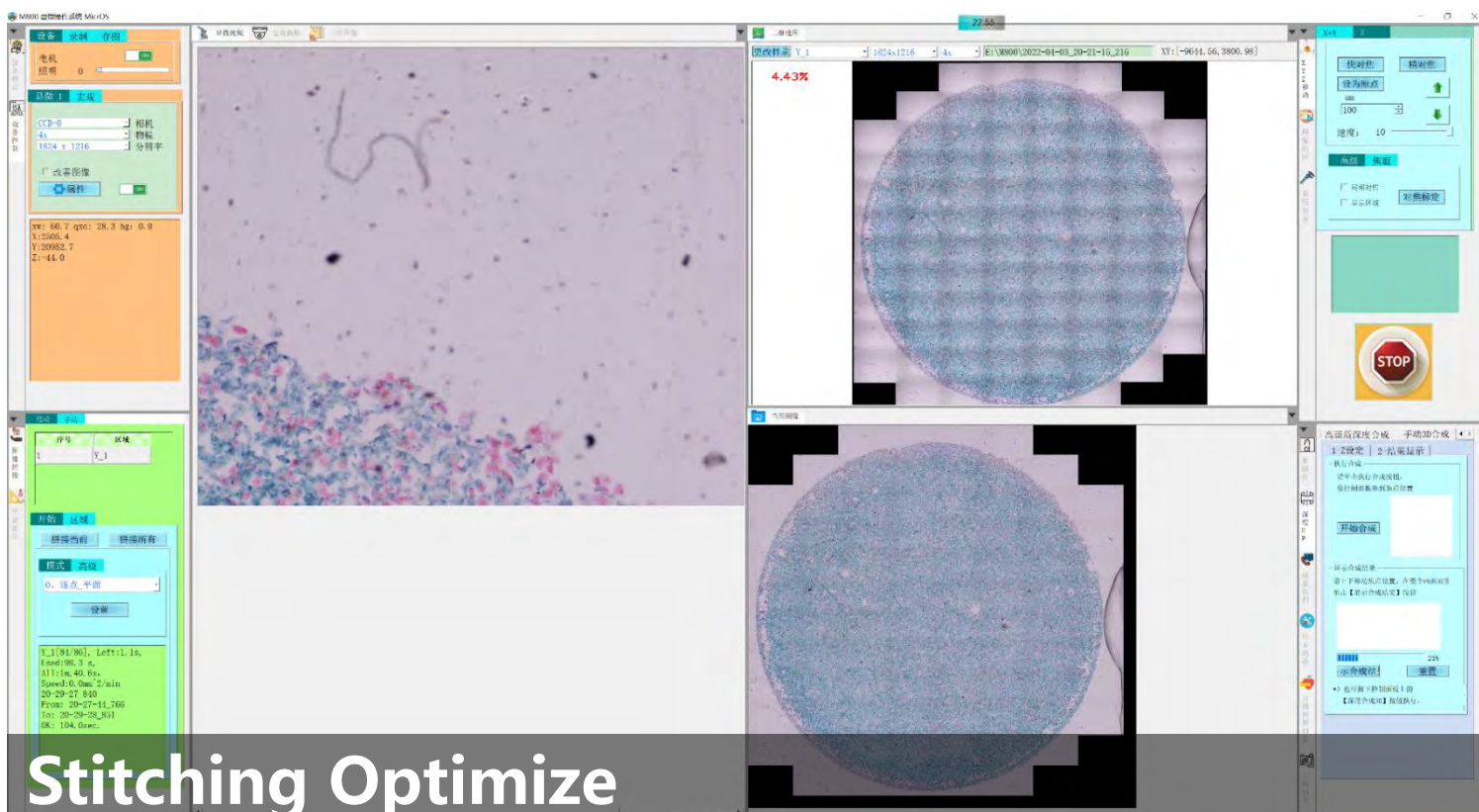
In addition to the basic XY motorized scanning and stitching, the advanced 2D scanning mode can simultaneously perform continuous scanning along the Z axis until the focus is found or depth of field fusion is made, and then panoramic stitching is performed. Even for industrial samples with uneven surfaces, or biological slices with uneven thickness under high magnification 40x or 100x, high-resolution 2D or 3D scan images with clear focus in all areas can be obtained





## Free Stitching Area

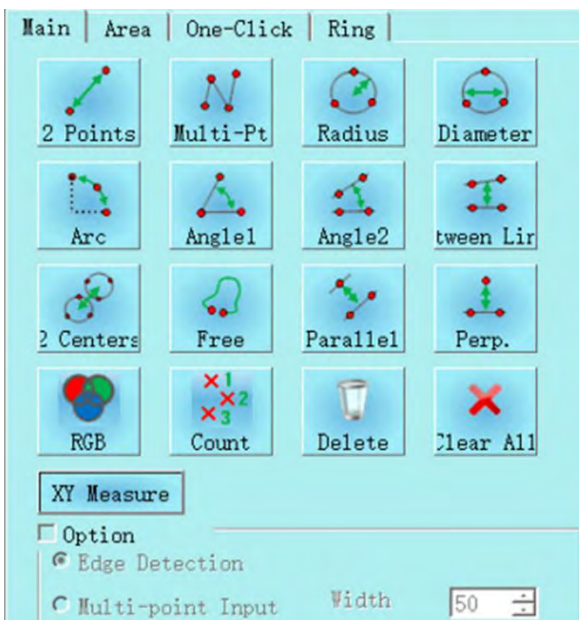
The scan area can be automatically recognized by the software (the contour line mode automatically detects the edge contour of the object). Software also provides a variety of manual selection scan area modes, free curve mode can draw any shape as splicing area



## Stitching Optimize

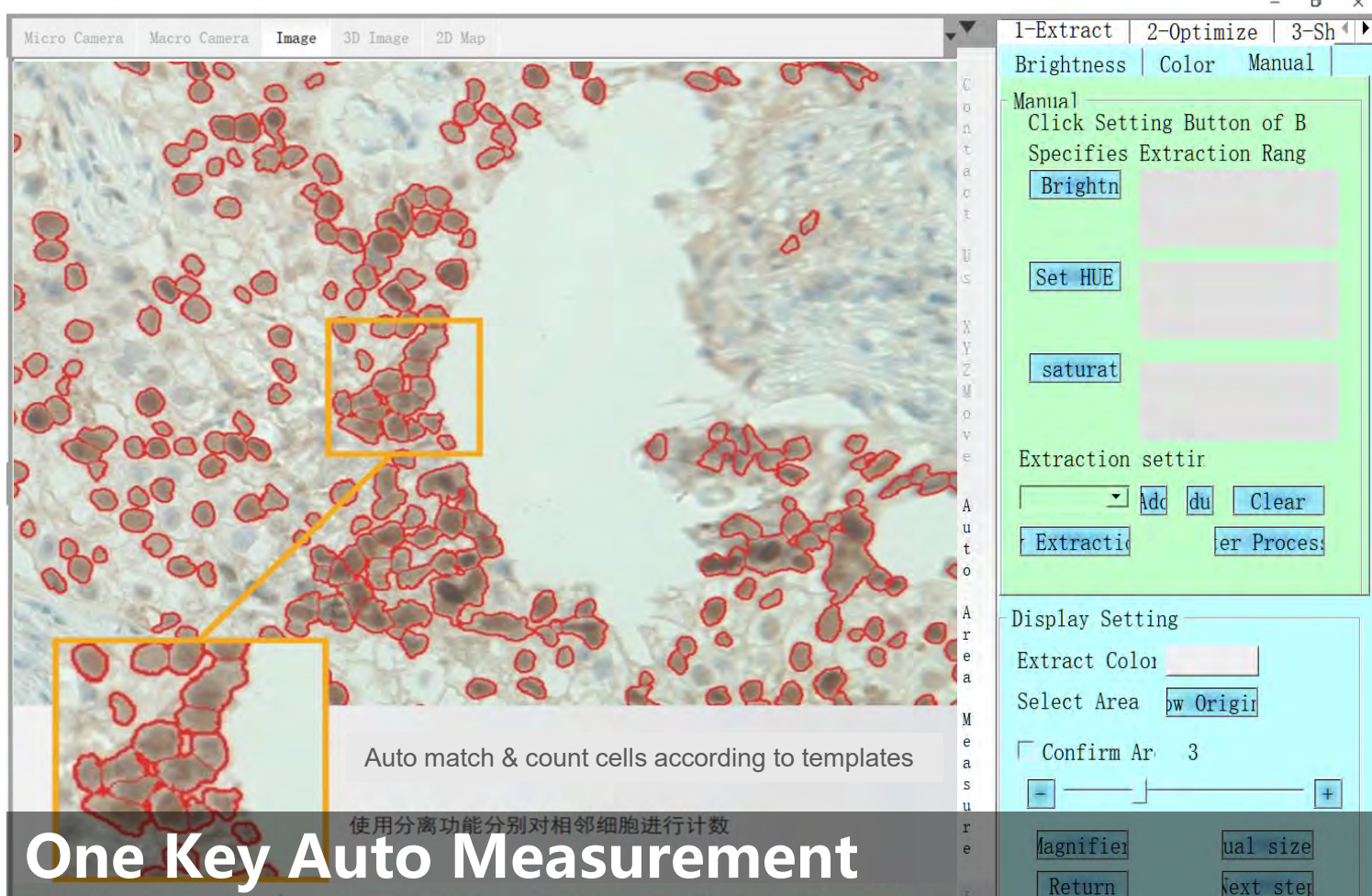
The built-in advanced algorithm can intelligently optimize and correct the grid phenomenon and shadow phenomenon caused by lens aberration, uneven lighting and other factors when scanning and stitching, so that the stitched image will be one high-definition, no offset, no grid, no shadow.





## All Kind 2D Measurement

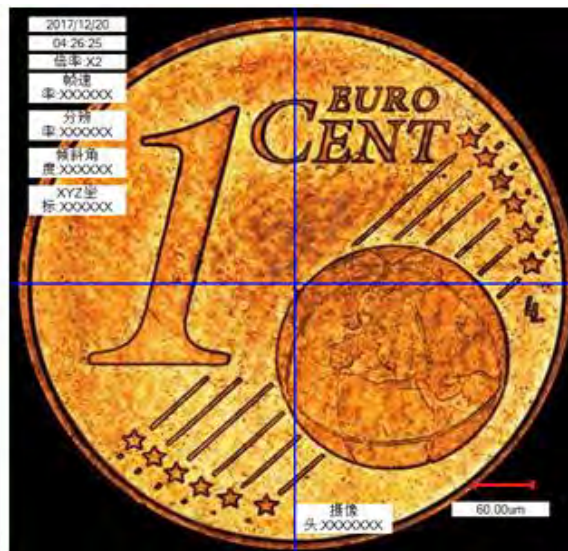
2D plane measurement function, length, angle, radius, diameter, free-form curve length, parallel line distance, point-line distance, 2-point distance, multi-point distance, radius, diameter, arc length, RGB measurement, counting and other 10 kinds of measurements mode, and provides a variety of auxiliary lines, reference line tools, free coordination can achieve various complex measurements



## One Key Auto Measurement

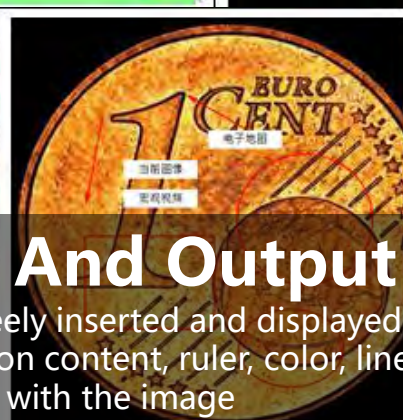
Multiple measurement items can be saved as templates, the software intelligently matches similar shapes, removes redundant targets or separates overlapping targets, and automatically performs unified measurement, counting and analysis for multiple targets with one key.





## Freely Remark And Output Reports

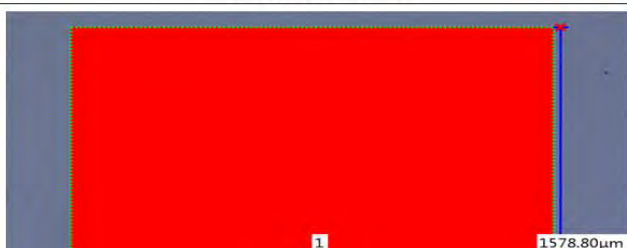
Remark information can be freely inserted and displayed in the microscope video window and 2D map window. The annotation content, ruler, color, line, etc. can be freely set, and output to the experimental report along with the image



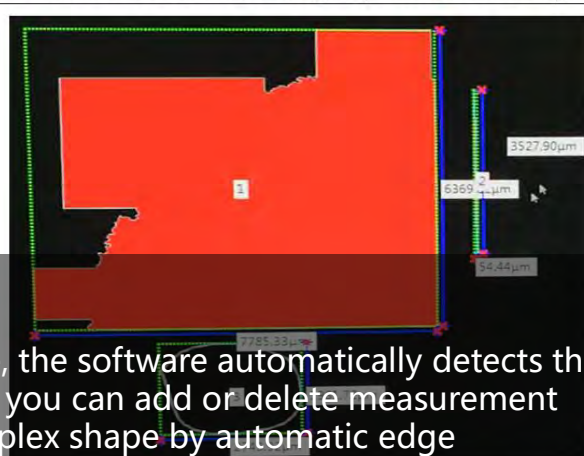
Max/Min Diameter



Circumscribed Rectangle (Minimum Area)



Circumscribed Rectangle (Ferret's Diameter)

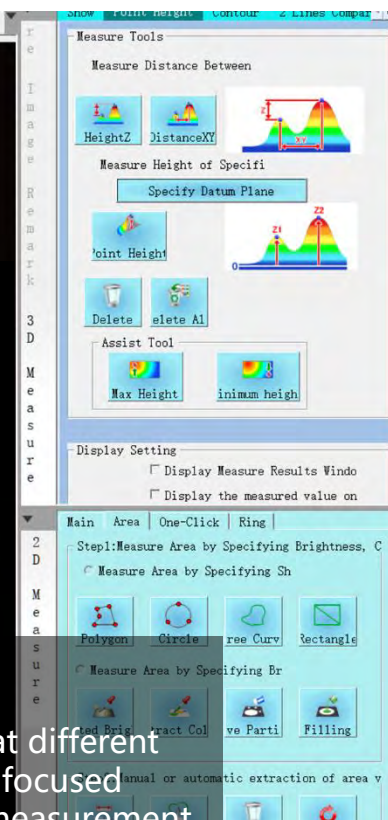
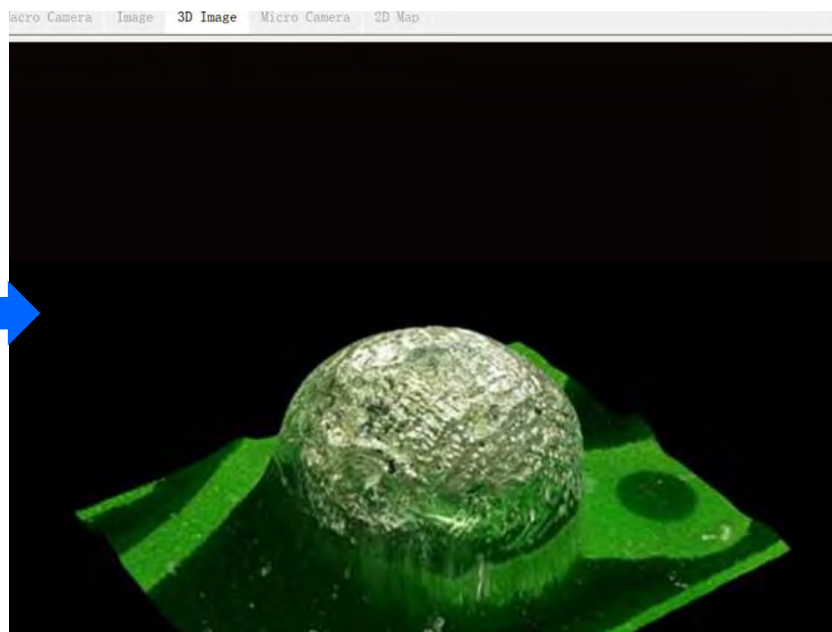
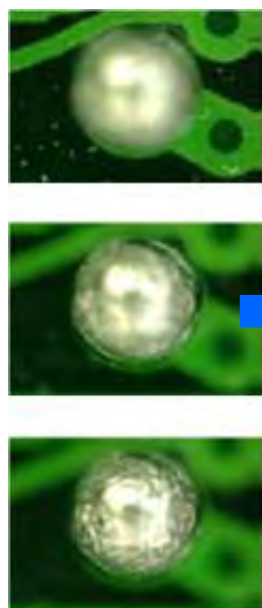


Circumscribed Rectangle (Arbitrarily Specified)

## Max Area Measurement

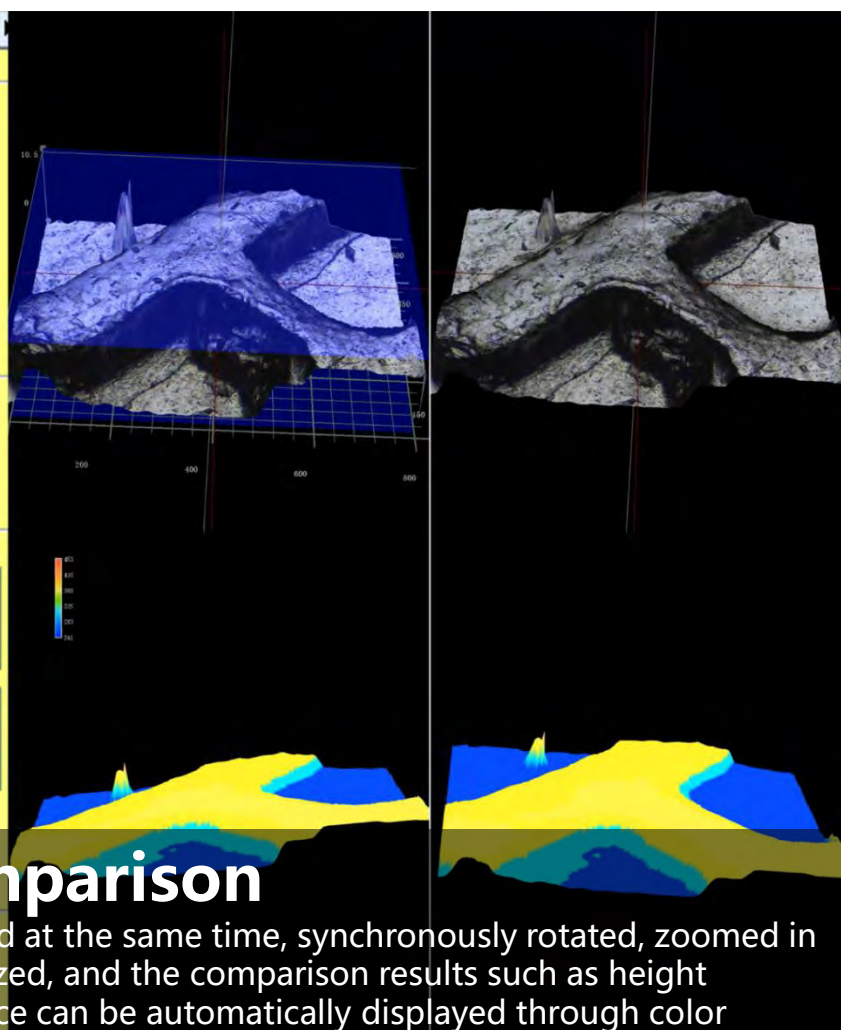
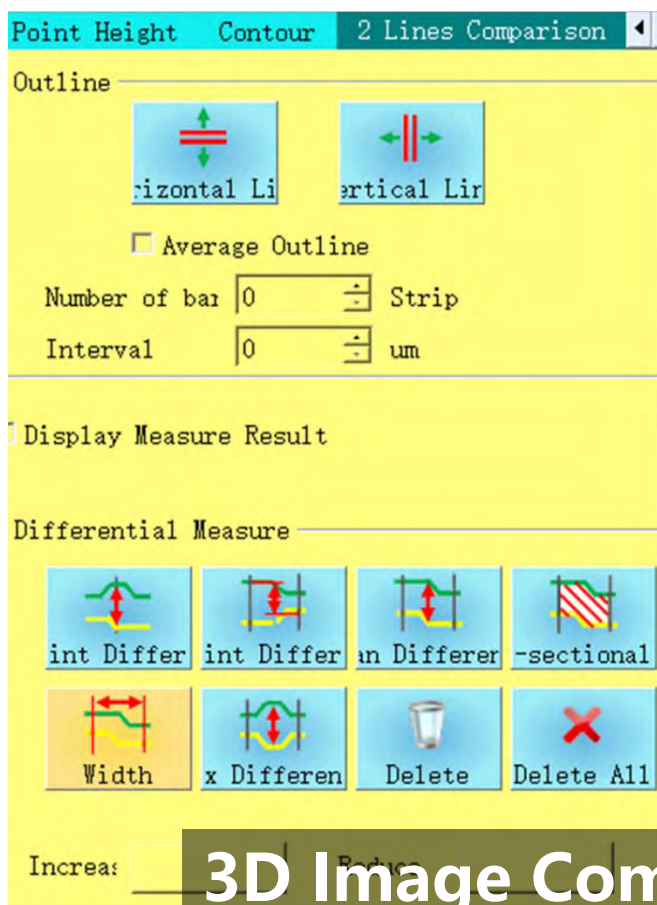
Just use the mouse to specify the measurement range, the software automatically detects the edge of the object and selects the measurement area, you can add or delete measurement areas at will, and measure the largest area of any complex shape by automatic edge recognition instead of manual precise positioning





## 3D Stitching

It can take pictures of uneven observation objects after auto-focusing at different heights, obtain a full-frame clear 2D image synthesized from all clearly focused images, and stitch together to form a 3D image, and retain all the 3D measurement data of the observed object for later observation and analysis. Measurement. Super powerful algorithm can achieve 200-500 layers of fusion.



## 3D Image Comparison

Two 3D images can be opened at the same time, synchronously rotated, zoomed in and out, compared and analyzed, and the comparison results such as height difference and shape difference can be automatically displayed through color identification



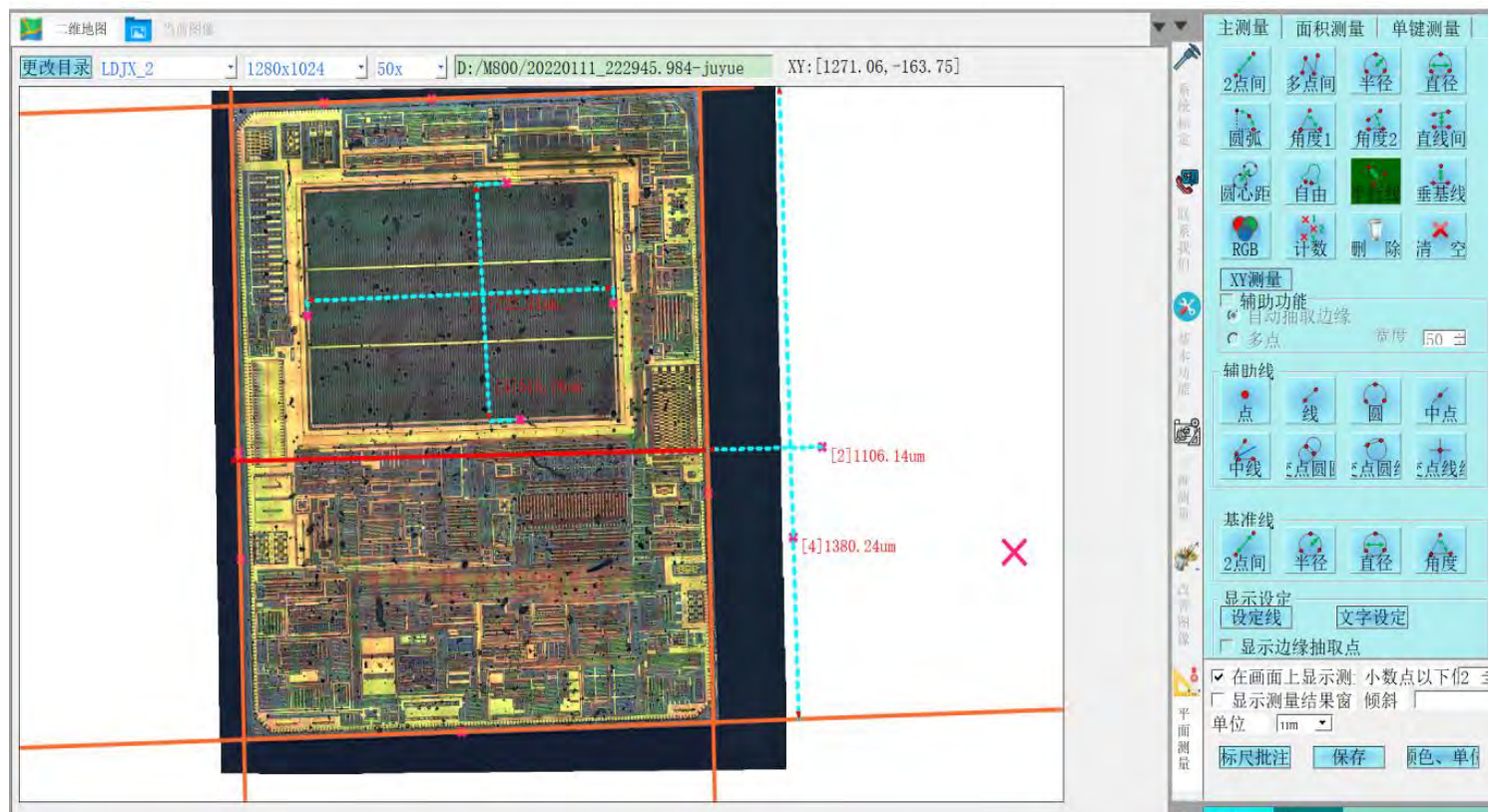


The saved 3D image can be opened at any time, controlled by the mouse to rotate freely, zoom in and out, open the ruler, color identification and other auxiliary tools, which is convenient to visually observe the two-dimensional surface shape and three-dimensional structure of the object from any angle, and thoroughly and clearly understand the observed object. object

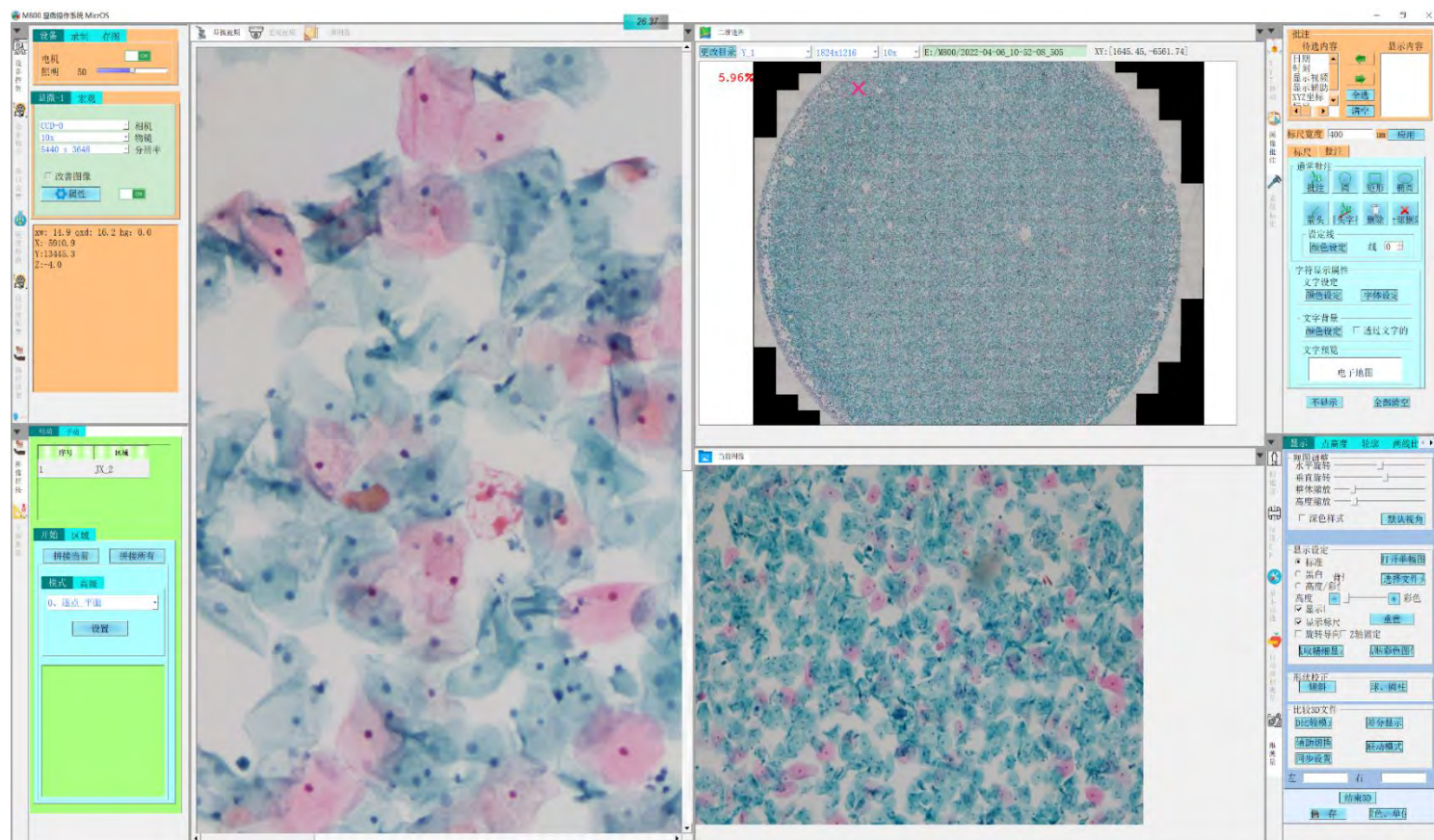


3D image also saves all the three-dimensional measurement data of the observed object, and supports any measurement of the observed object later, including the height, depth, length, roughness, convex area, concave area, convex volume, concave volume, etc.



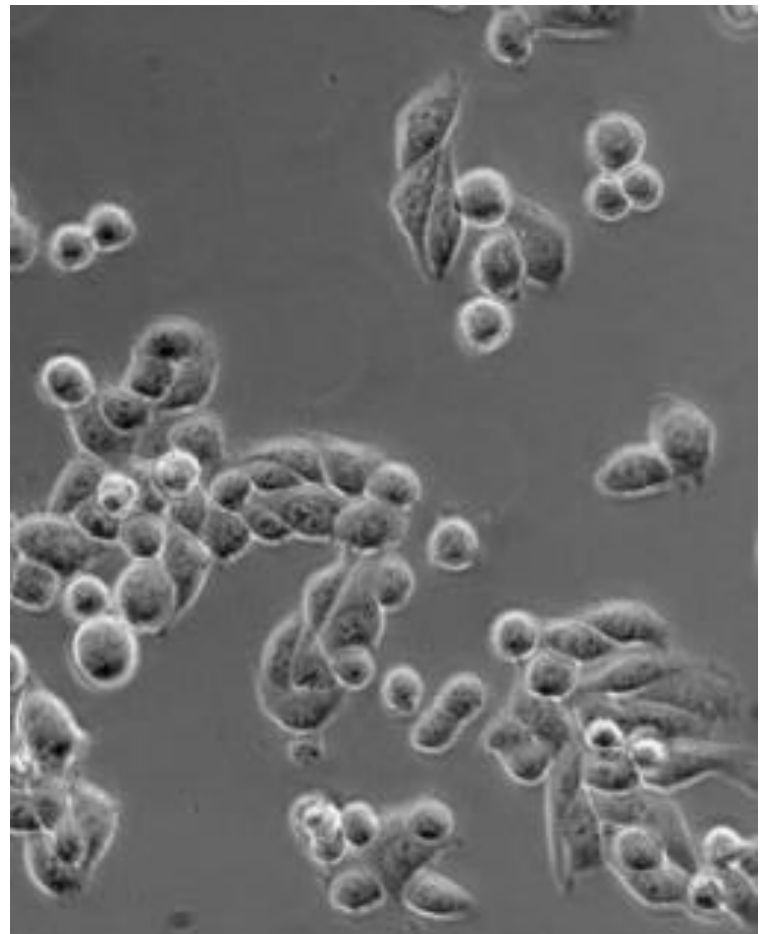
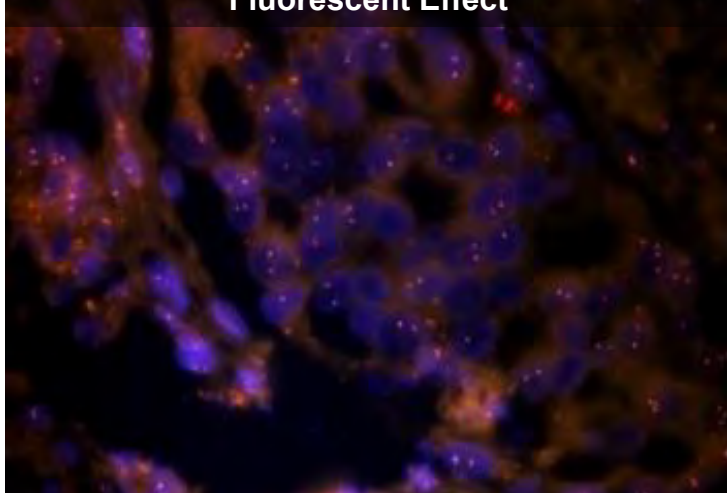
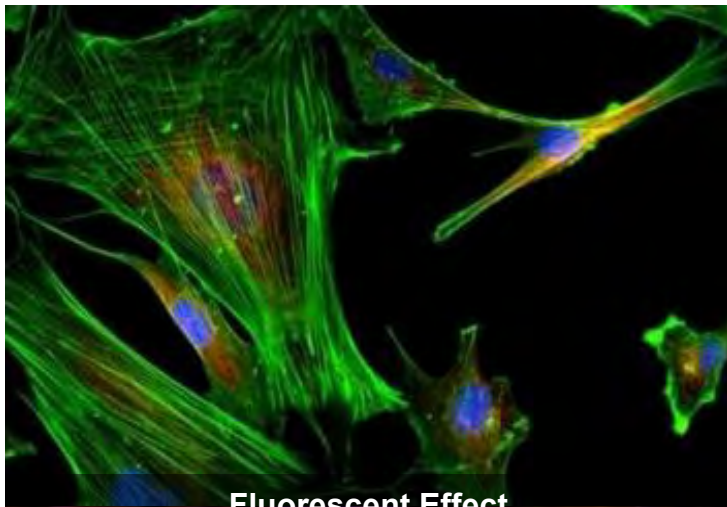
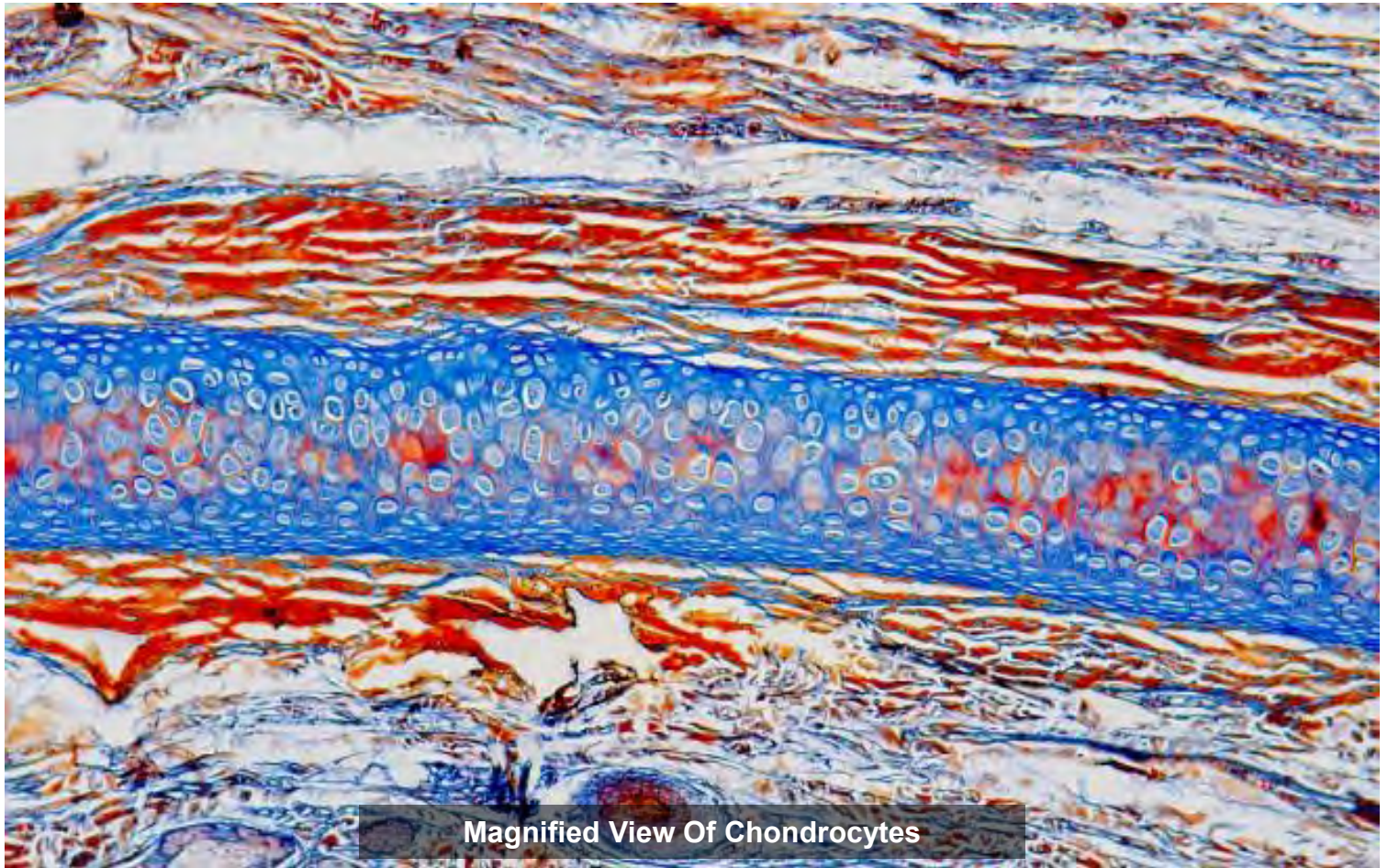


50x Objective Chip 1.3x1.1mm 2D Stitch & Measure



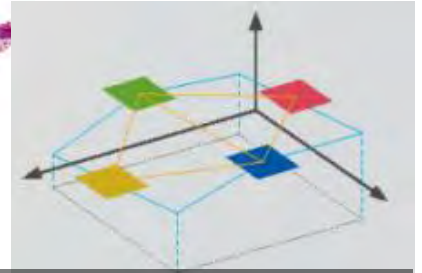
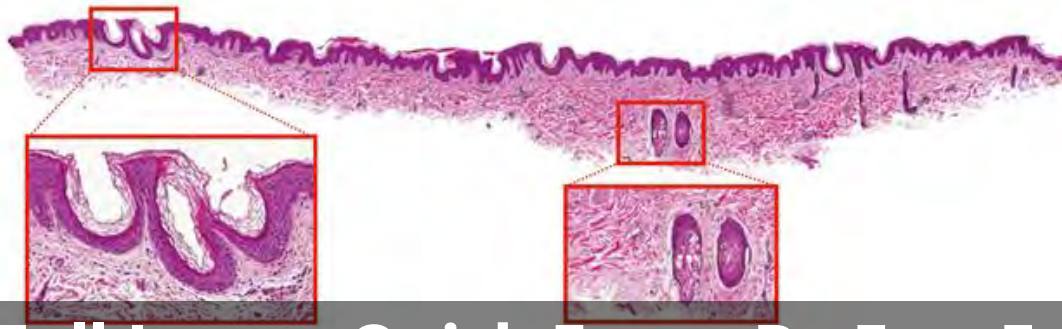
10x Objective Cervical Cancer Section 2D Stitch, 2D Map





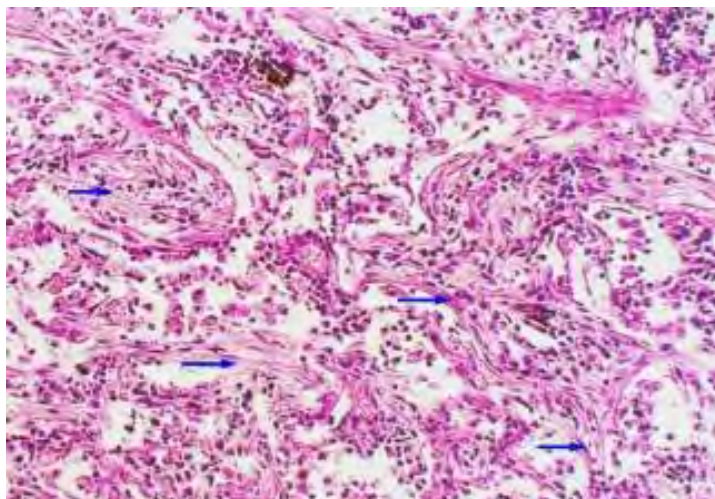
**Phase Contrast Effect**



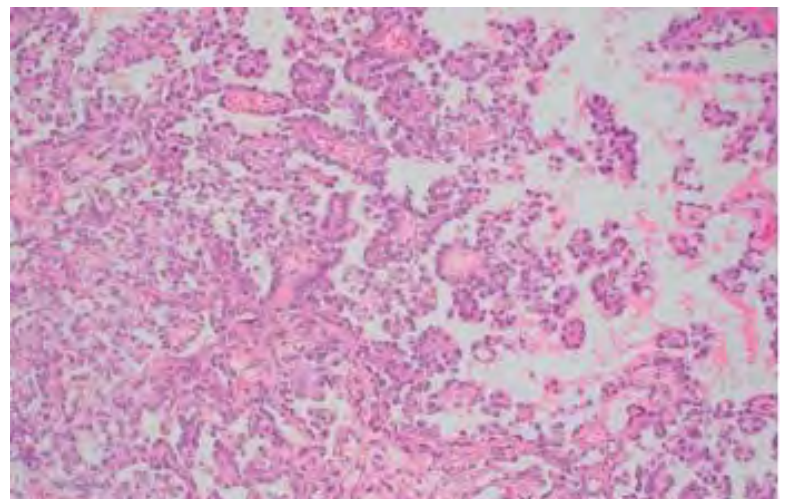


## Full Image Quick Focus By Few Frames

Multiple virtual planes are created according to the height of each registered coordinate when the range is set, and the Z position is slightly adjusted along the shape of the plane to shoot. Full-focus, wide-field images can be quickly captured with a small number of frames.



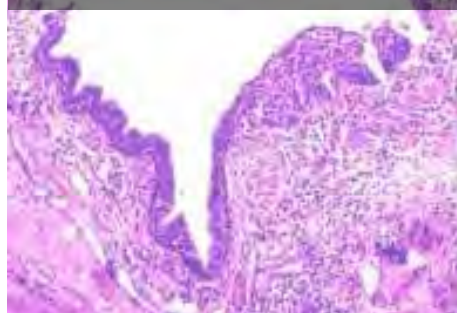
Lung Fleшы Change (Lobar Lung Change)



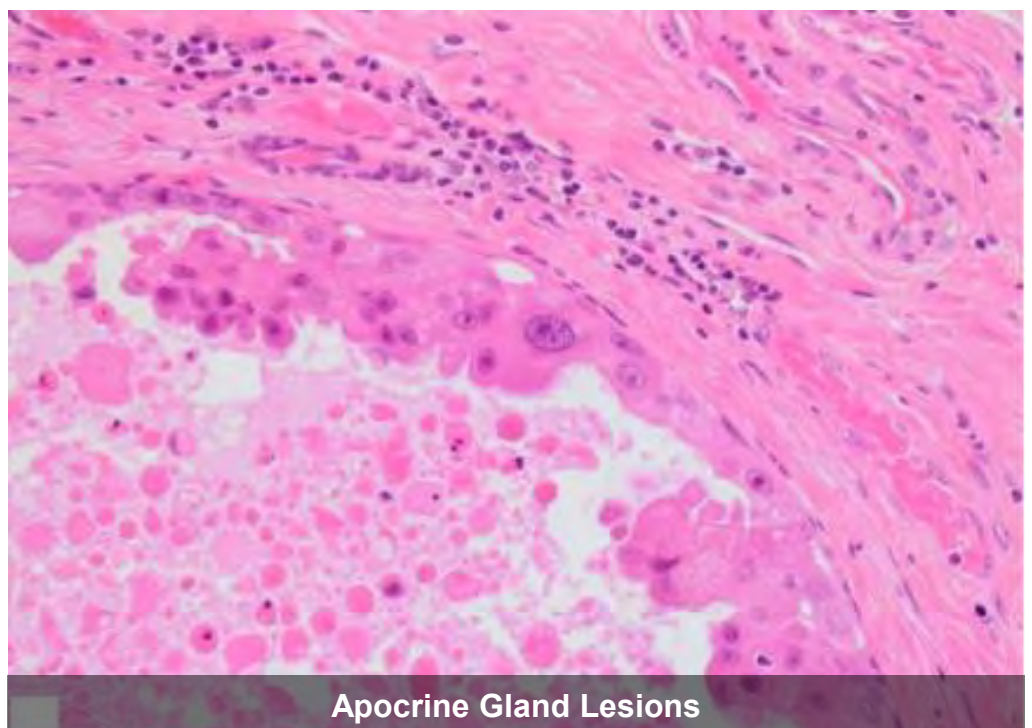
Ovarian Yolk Sac Tumor



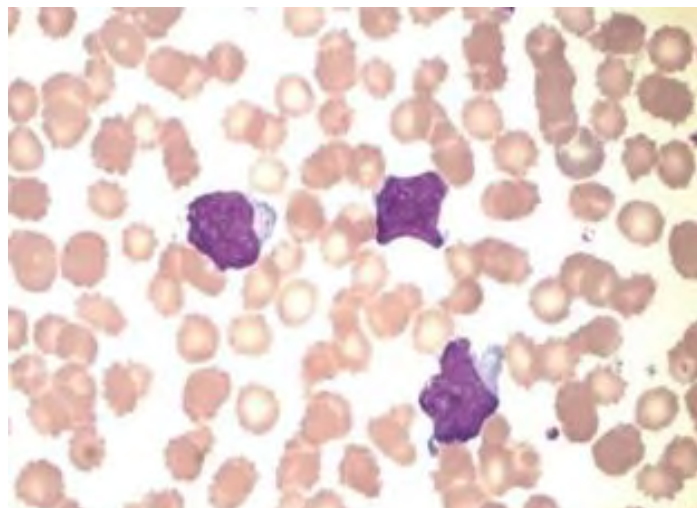
Thickening Of Lung Markings



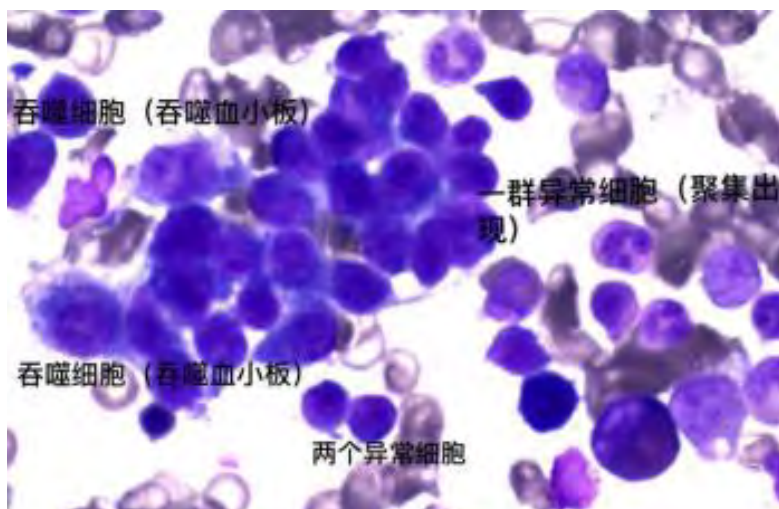
Apocrine Gland Lesions



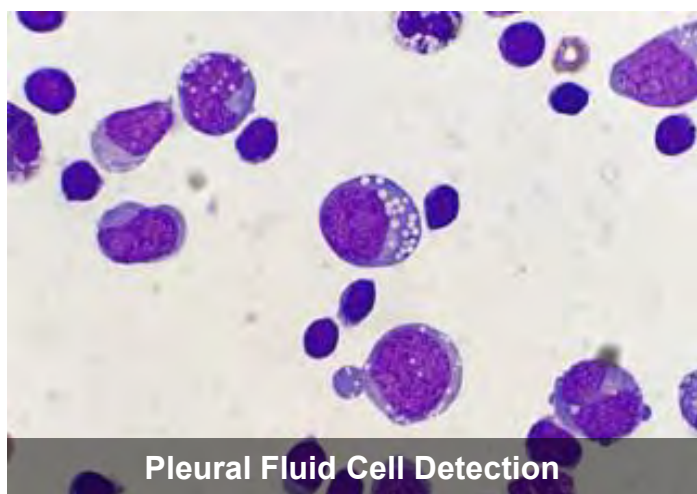




Peripheral Blood Smear - Wright's Stain (1000x)



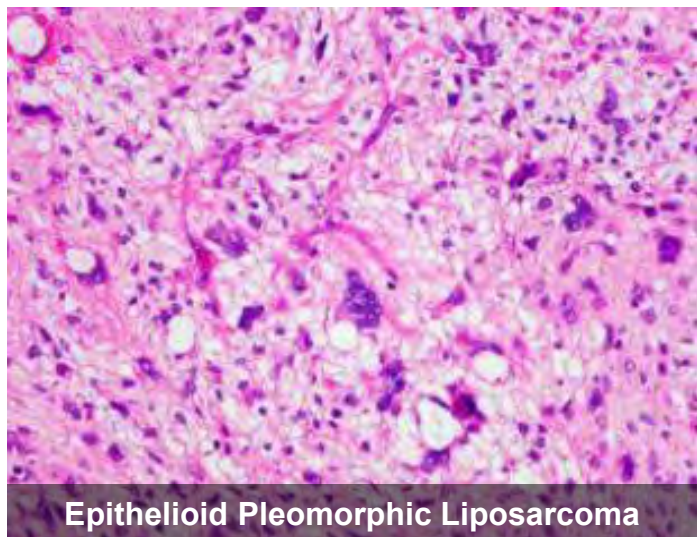
Lymphocyte Detection



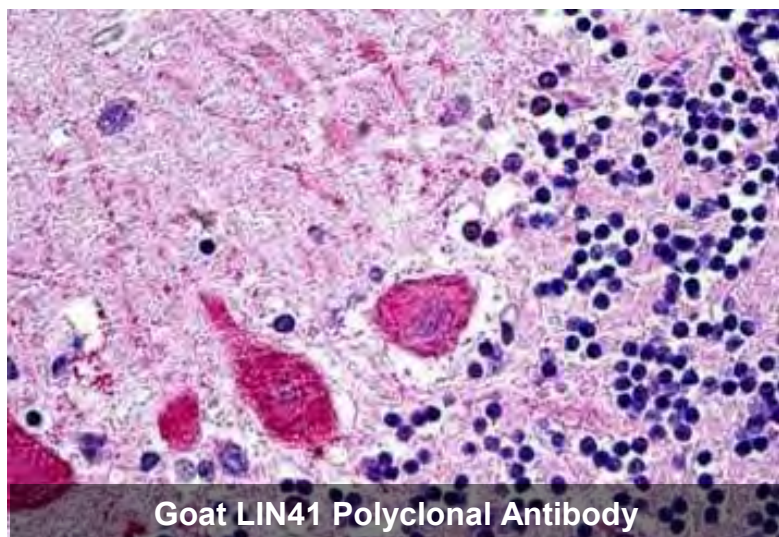
Pleural Fluid Cell Detection



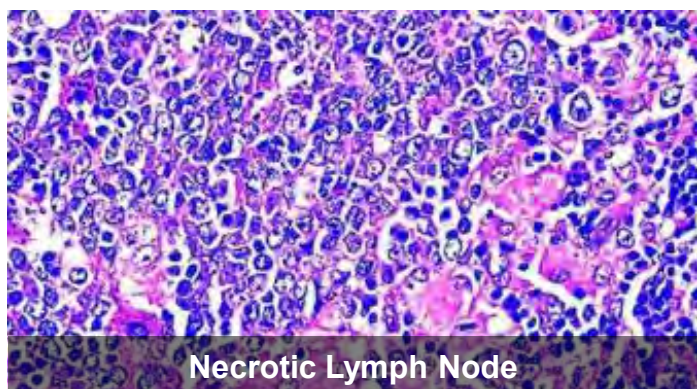
Fiber Filaments (100x)



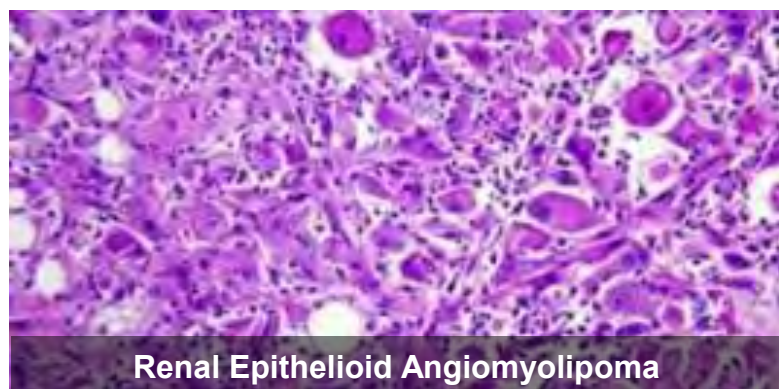
Epithelioid Pleomorphic Liposarcoma



Goat LIN41 Polyclonal Antibody

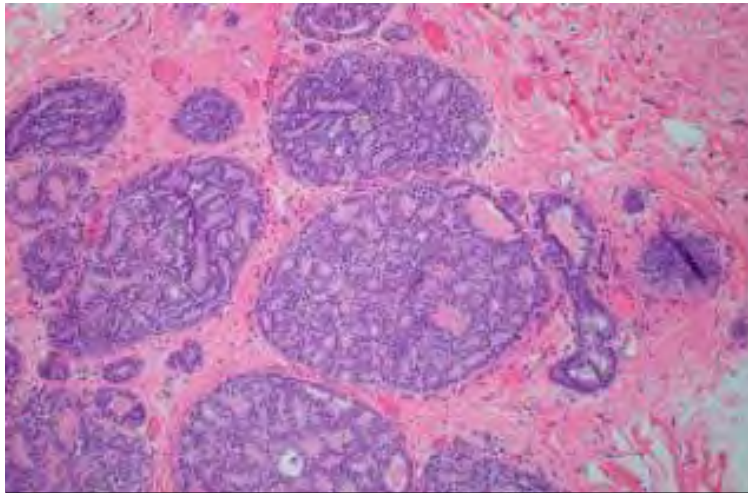


Necrotic Lymph Node

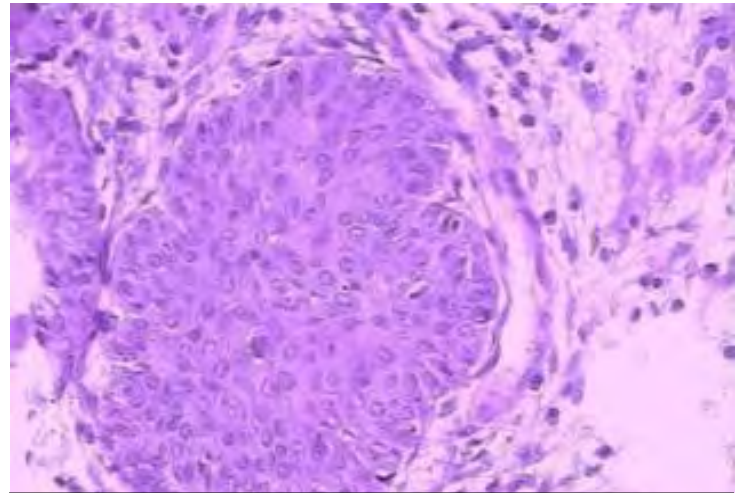


Renal Epithelioid Angiomyolipoma

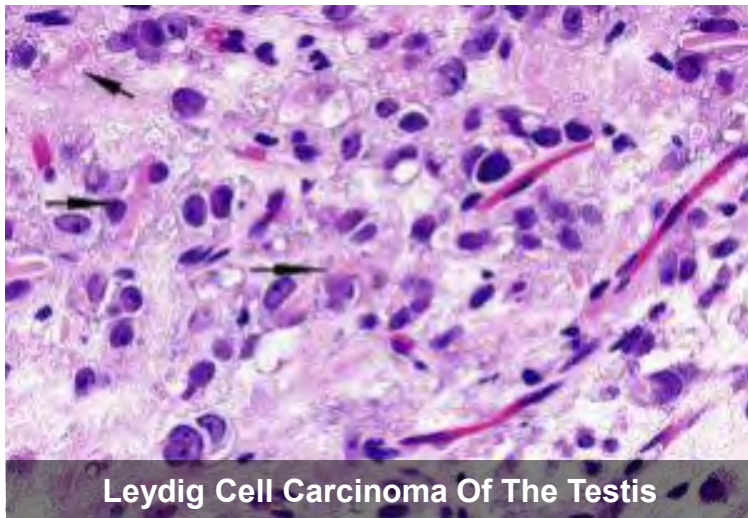




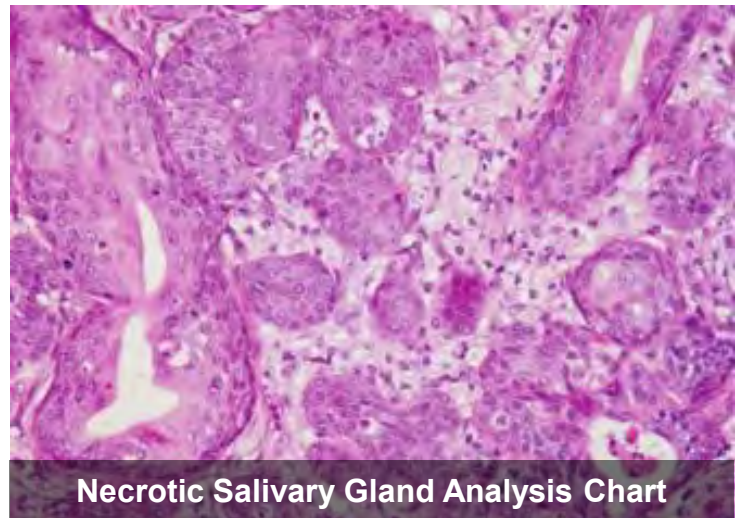
**Ductal Carcinoma In Situ Of Breast**



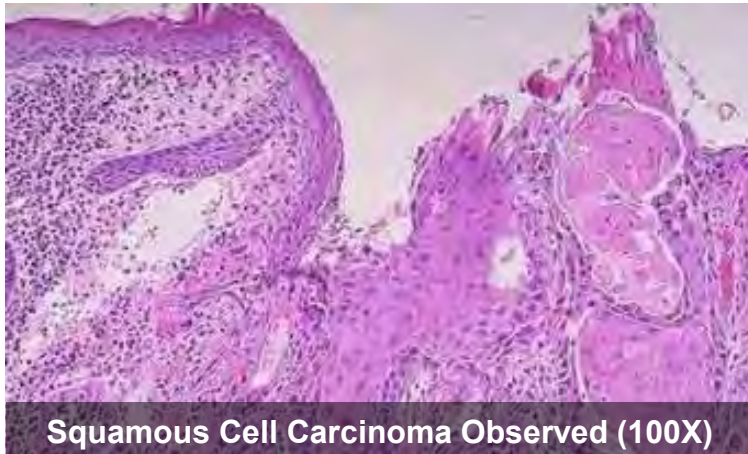
**Intestinal Polyp Pathology**



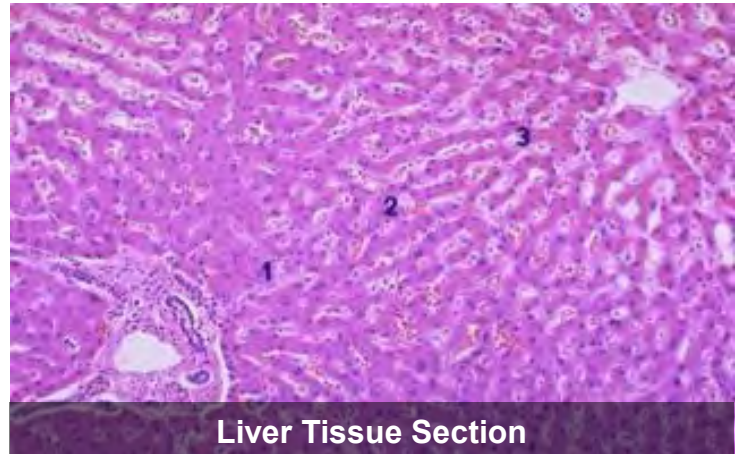
**Leydig Cell Carcinoma Of The Testis**



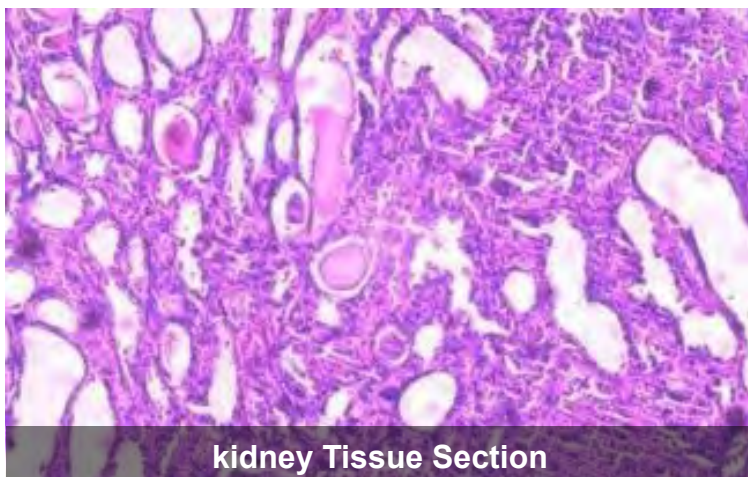
**Necrotic Salivary Gland Analysis Chart**



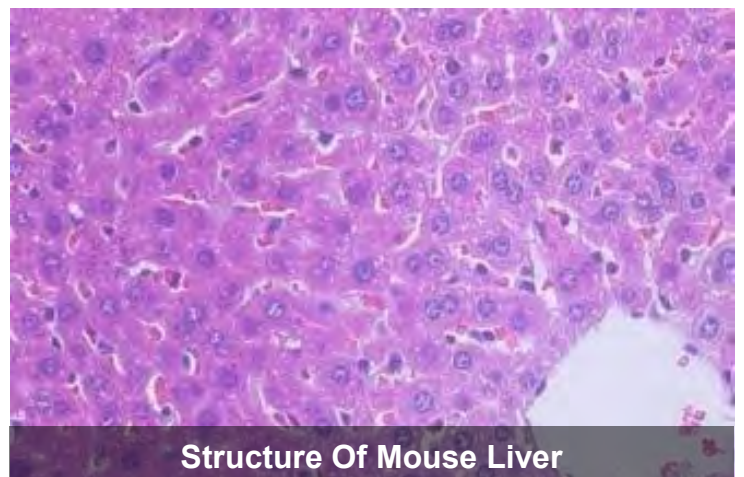
**Squamous Cell Carcinoma Observed (100X)**



**Liver Tissue Section**



**kidney Tissue Section**



**Structure Of Mouse Liver**



**M12.5820, M16.5820** is newly designed Full Auto Motorized Research Level Scientific Laboratory Microscope, equipped with electric platform, auto focus, electric objective conversion, and powerful imaging software Maxcope; Through the precise connection between the parts, the functions of microscope observation, image acquisition and image processing are realized, and the repetitive operation is reduced. In addition, it can restore the microscope settings and parameter settings of the last operation, and improve the stability and accuracy of microscope imaging. Microscope operation can be so fast and efficient.

M12.5820 Motorized Research Level Biological Microscope M16.5820 Motorized Research Level Fluorescent Microscope		M12.5820	M16.5820	Cata. No.
Optical System	NIS60 Infinity Optical System	●	●	
Observation Method	Bright Field	●	●	
	Dark Field	○	○	
	Polarizing	○	○	
	Phase Contrast	○	○	
	Flourescent	○	●	
	DIC	○	○	
Main Body	A12.1091-H Manual Body + Halogen Illumination.	●	●	A54.1090-BH
	A12.1091-L Manual Body + LED Illumination.	●	●	A54.1090-BL
Head	Seidentopf Binocular Head, Inclined 30°, Interpupillary Distance 47-78mm	○	○	A53.1090-B
	Seidentopf Trinocular Head, Inclined 30°, Interpupillary Distance 47-78mm, 3 Level Light Split Switch E100:P0/E20:P80/E0:P100	●	●	A53.1090-T
	Ergo Tilting Trinocular Head, Inclination 0°~35°, Interpupillary Distance 47-78mm, 3 Level Light Split Switch E100:P0/E20:P80/E0:P100	○	○	A53.1090-TT
	7.0M USB3.0 CMOS Cooling GS Shutter Digital Camera, For Fluorescent Imaging,, 1.1" CMOS, FPS 12@3200x2200, 33@1600x1100, Semi-Conductor Cooling Range -42° C, Anti-Frog, One Hour Exposure, G Sensitivity Dark Signal 2058mv with 1/30s	●	●	A59.2225-7MPA
Eyepiece	SW10x/25mm, High Eyepoint, Diopter Adjustable, Dia.30mm	●●	●●	A51.1090-1025
	SW10x/22mm, High Eyepoint, Diopter Adjustable, Dia.30mm	○	○	A51.1090-1022
	EW12.5x/16mm, High Eyepoint	○	○	A51.1090-12516
	WF15x/16mm, High Eyepoint, Diopter Adjustable, Dia.30mm	○	○	A51.1090-1516
	WF20x/12mm, High Eyepoint, Diopter Adjustable, Dia.30mm	○	○	A51.1090-2012
Nosepiece	Manual Nosepiece, Quintuple, Backward, Center Adjustable	○	○	A54.1091-5M
	Manual Nosepiece, Sextuple, Backward	●	●	A54.1091-6M
	<b>Motorized Coded</b> Nosepiece, Sextuple, Backward	○	○	A54.1091-6C
	With Slot For Polarizing Compensator Slider Or DIC Slider	●	●	
NIS60 N-PLN Infinity Plan Objective	Protect Cover For Nosepiece Holes	●	●	A54.1091-C
	2x/0.06, W.D.7.5mm, Cover Glass 0.17mm	○	○	A52.1090-2
	4x/0.10, W.D.30mm, Cover Glass 0.17mm	○	○	A52.1090-4
	10x/0.25, W.D.10.2mm, Cover Glass 0.17mm	○	○	A52.1090-10
	20x/0.40, W.D.12mm, Cover Glass 0.17mm	○	○	A52.1090-20
	40x/0.65, W.D.0.7mm, Cover Glass 0.17mm	○	○	A52.1090-40
	50x/0.95(Oil, W.D.0.19mm, Cover Glass 0.17mm	○	○	A52.1090-50
	60x/0.8, W.D.0.3mm, Cover Glass 0.17mm	○	○	A52.1090-60
NIS60 APO Infinity Plan	100x/1.25(Oil), W.D.0.2mm, Cover Glass 0.17mm	○	○	A52.1090-100
	20x/0.75, W.D.1.1mm, Cover Glass 0.17mm	○	○	A52.1091-20
N-PLFN Infinity Plan Semi-APO Fluorescent Objective	100x/1.45(Oil), W.D.0.13mm, Cover Glass 0.17mm	○	○	A52.1091-100
	PlanF S-APO 4x/0.13, W.D.16.5mm, Cover Glass 0.17mm	●	●	A5F.1091-4
	PlanF S-APO 10x/0.30, W.D.8.1mm, Cover Glass 0.17mm	●	●	A5F.1091-10
	PlanF S-APO 20x/0.50, W.D.2.1mm, Cover Glass 0.17mm	●	●	A5F.1091-20
	PlanF S-APO 40x/0.75, W.D.0.7mm, Cover Glass 0.17mm	●	●	A5F.1091-40
	PlanF S-APO 100x/1.30(Oil), W.D.0.15mm, Cover Glass 0.17mm	●	●	A5F.1091-100
Condenser	Swing-Out Condenser NA0.9/0.25	●	●	A56.1091-S
Focusing	<b>Motorized</b> & Manual Coaxial Coarse & Fine Focusing, Fine Division 0.001mm, Focusing Range 35mm, Coarse Stroke 37.7mm, Fine Stroke 0.1mm	●	●	





# M12.5820, M16.5820 Specification




**MAXCOPE**

M12.5820 Motorized Research Level Biological Microscope M16.5820 Motorized Research Level Fluorescent Microscope		M12.5820	M16.5820	Cata. No.
Light Source	Transmit Kohler Illumination, Brightness Adjustable, 12V100W Halogen, External Lamp House For A12.1091-H, A12.1093-H	●	●	A56.1090-12V100W
	Transmit Kohler Illumination, Brightness Adjustable, 3W S-LED, Built-in Main Body For A12.1091-L, A12.1093-L	○	○	A56.1090-3WLED
	ECO Function Support Auto Power Off After 30 Mins From Operator Leave To Save Energy	●	●	A56.1090-ECO
Filter For Transmit Light	Filter Holder On Base, Can Hold 3 Filters	●	●	A56.1092-H
	Filter LBD	●	●	A56.1092-LBD
	Filter Green	●	●	A56.1092-G
	Filter Yellow	●	●	A56.1092-Y
	Filter ND6	●	●	A56.1092-ND6
	Filter ND25	●	●	A56.1092-ND25
Adapter	Eyepiece Adapter Dia.23.2mm	○	○	A55.1090-E
	C-Mount 1.0x	○	○	A55.1090-1.0x
	C-Mount 0.5x	●	●	A55.1090-0.5x
Software	NOMIS Basic Image Processing Software	○	○	A30.1090
Dark Field	Dark Field Condenser, N.A. 0.7~0.9, Dry	○	○	A5D.1090-D
	Dark Field Condenser, N.A. 1.25~1.36, Immersion	○	○	A5D.1090-I
	Dark Field Objective, Infinity Plan 100X, For Immersion Dark Field Observation	○	○	A5D.1030-3
	Dark Field Objective, Infinity Plan 100X, With Iris Diaphragm, For Immersion Dark Field Observation	○	○	A5D.1030-4
Polarizing	Polarizer For Transmit Light Source, Swing-Out, On Collector	○	○	A5P.1091-BP
	Analyzer For Transmit Light, Slide With Quartz Wedge Compensator	○	○	A5P.1091-BA
	Upgrade To <u>A15.1091</u> Professional Polarizing Microscope	○	○	<u>A15.1091</u>
Phase Contrast	Turret Phase Contrast Condenser, Center Adjustable	○	○	A5C.1090
	Centering Telescope 10x	○	○	A5C.1092
	Infinity Plan Phase Contrast Objective N-PLN PH 10x/0.25	○	○	A5C.1091-10
	Infinity Plan Phase Contrast Objective N-PLN PH 20x/0.40	○	○	A5C.1091-20
	Infinity Plan Phase Contrast Objective N-PLN PH 40x/0.65	○	○	A5C.1091-40
	Infinity Plan Phase Contrast Objective N-PLN PH 100x/1.25(Oil)	○	○	A5C.1091-100
DIC	Polarizer For Transmit Light Source	○	○	A5P.1090-TP
	Turret DIC Condenser	○	○	A5C.1095
	DIC Slide 10x, Used With Semi-APO Fluorescent Objective	○	○	A5C.1095-10
	DIC Slide 20x/40x, Used With Semi-APO Fluorescent Objective	○	○	A5C.1095-2040
	DIC Slide 100x, Used With Semi-APO Fluorescent Objective	○	○	A5C.1095-100
	DIC Slide With Analyzer 10x-20x	○	○	A5C.1095-1020P
	DIC Slide With Analyzer 40x-100x	○	○	A5C.1095-40100P
Fluorescent	Reflect Mercury Epi-Fluorescent Illuminator, Turret Disc With 6 Positions For Fluorescent Filter Block, With Protect Barrier	○	●	A5F.1090
	Power Supply Box 220V/110V Interchangeable, Digital Display	○	●	A5F.1090-100WH
	100W Mercury Lamp Housing	○	●	A5F.1090-100WP
	Fluorescent Filter B,G,U,V	○	●	A5F.1090-B,G,U,V
Other Accessories	Working Stage Holder Bracket	●	○	A54.1096
	Adapter To Adjust Eye Position	○	○	A54.1096-A1
	Adapter To Lower The Stage Position 1"	○	○	A54.1096-A2
	Immersion Oil	●	○	A50.1090-01
	Allen Wrench	●	○	A50.1090-02
	Power Cord	●	○	A50.1090-03
	Short Eye Cover, For Eyepiece	○	○	A50.1090-04
	Long Eye Cover, For Eyepiece	○	○	A50.1090-05
	Eyepiece Micrometer, Cross	○	○	A50.1090-06
	Adapter Ring To Install Eyepiece Micrometer	○	○	A50.1090-07
	USB Cable	○	○	A50.1090-08

Note: "●" In Table Is Standard Outfits, "○" Is Optional Accessories "-" Is Unavailable



## Motorized Working Stage, Computer & Software

Motorized Working Stage	XYZ Motorized Working Stage, 2-Phase Stepping Motor, High Precision Module, Aluminum Alloy Material, Surface Anodized, Anti-Corrosion And Scratch-Resistant --For Biological Transmit Light Source, With 6 Slides Holder --For Metallurgical Reflect Light Source, With Metal Plate	• 	A54.5806
Size	255x210mm		
XYZ Moving	85x70x42mm		
Resolution	<0.05um		
Repeatability	≤20um		
Maxcope Software	2D, Plane Scan, For XY or XYZ Stage+2C Computer	•	A30.5801-2D
	2DB, Add Bevel Scan, For XYZ Stage+2C Computer	○	A30.5801-2DB
	2DF, Add Up/Down Fusion Scan, For XYZ Stage+3C Computer	○	A30.5801-2DF
	3D, Add 3D Scan, For XYZ Stage+3C Computer	○	A30.5801-3D
	Customized Function, Detail See Maxcope Software Version Table	○	A30.5801-CF
Computer	Dell i5 64G 256G+1T, 2G Graphic, 27" 4K, Pre-Installed Maxcope Software.	•	A30.5801-2C
	Standard Computer For 2D, 2DB Version Software		
	Dell Xeon W-2265 12 Core 3.5GHz, 128G+1T NVMe 4T, RTX4000-8G, 27" 4K, Pre-Installed Maxcope Software.	○	A30.5801-3C
	Standard Computer For 2DF, 3D Version Software		

## Maxcope Software Version Table

### 2D Version

#### (Standard Version, For XY or XYZ Stage + 2C Computer)

XY Motorized Control	Control the motorized stage through software, support one-click set/return to origin point, three ways control methods: • Click the 8-direction arrow with the mouse to manually control the stage movement, and the step distance and move speed can be freely adjusted • Long press the mouse and drag in the camera preview window, to move the working stage to the corresponding direction • Double-click the mouse at any point in the preview window, the point will be set as center of the window, the stage will move accordingly
2D Plane Scan	2 kinds plane scan modes, no need auto or manual focus during stitching, for plane smooth surface or low magnification view, XY stage will direct scan single focal plane and stitch the 2D image • Plane PXP Scan, point by point, high precision, slow speed • Plane Fly Scan, line by line, low precision, high speed Supports automatic scanning and stitching of 2D images at any magnification, with optional scanning accuracy and speed.
Free Stitching Area	Provides 6 stitching area modes, which can quickly set stitching areas of any shape: Polygon, 2-point rectangle, 3-point circle, 4-point ring, outline, free curve. • Outline mode can automatically detect the edge contour of the object as the stitching area. • Free curve mode can freely draw any shape as the stitching area.
2D Stitching Optimize	The built-in advanced algorithm can intelligently optimize and correct the grid phenomenon and shadow phenomenon caused by lens aberration, uneven lighting and other factors when scanning and stitching, so that the stitched image will be one high-definition, no offset, no grid, no shadow.
Calibration	It can do the necessary calibration before measurement, for different camera & objective lenses, user can add, delete, and manage the calibration list at any time
2D Measurement	2D plane measurement 10+ functions, including length, angle, radius, diameter, free curve length, parallel line distance, point-line distance, 2-point distance, multi-point distance, radius, diameter, arc length, RGB measurement, counting, etc. and a variety of auxiliary lines and reference line tools are provided. Combined with these tools, various complex measurements can be achieved, and various measurable information of planar images can be obtained more efficiently.
2D Map Guide	After scanning and stitching to generate a panoramic image, it can be used as an electronic 2D map for navigation. Click the 2D map to control the motorized stage to quickly locate the specified position for high-magnification observation, avoiding the confusion of difficult positioning in traditional high-magnification observation.
Point of Interest	Click the mouse to freely set and save multiple points of interest on the image, you can select and quickly return to the point of interest at any time for repeated focus observation
Marco Camera Guide	The model with optional macro camera, the panoramic image previewed in real time can be used as an electronic 2D map for navigation function, one click can reach the point of interest for high-power observation
Motorized Nosepiece	Optional motorized nose wheel models, you can select different objective lenses in the software, and switch the magnification with one click



Full Parameter Record	While taking pictures and videos, software can automatically records comprehensive information such as shooting date, objective lens, magnification, stage position, etc., which is convenient for outputting to experimental reports or for reproducing observation results later.
Extra Long Video Record	The longest 1 hour, the fastest 50PFS video recording, can comprehensively record the experimental detection process, or the long-term change process of the observed object, subtle movements and other information. The video results can be fast-forwarded or played frame by frame, and still images can be extracted and saved.
Customized Report	Freely set Word and Excel report templates, including images and comprehensive shooting parameters, which is convenient for quickly outputting a complete inspection report in the later stage
Free Interface	The software interface and each submenu can be freely settled by dragging and dropping with the mouse, and can be saved, exported, and imported into the customized interface layout, and the default simple interface can also be restored easily by hot key Ctrl + G.
Multi Language	The software supports Simplify Chinese, Traditional Chinese, English, Russian, Korean, Japanese, Iranian, Dutch, French, German, Italian, and other language versions can be customized.
<b>2DB Version</b> <b>(2D + Below Functions, For XYZ Stage + 2C Computer)</b>	
Z Motorized Control	The software controls the Z-axis motorized lift, support professional functions such as manual focus/auto focus/super depth of field fusion <ul style="list-style-type: none"> <li>Click the up and down arrows with the mouse to manually control the Z-axis lift and focus</li> <li>One-click autofocus, focusing speed &amp; accuracy can be selected</li> </ul>
2D Bevel Scan	3 kinds Bevel Scan modes, can auto acquisition height of multi-focal planes, after modeling, scan and stitch 2d image, especially suitable for bevel smooth surface, <ul style="list-style-type: none"> <li>Bevel PXP Scan, Point by Point</li> <li>Bevel Fly Scan. Manual Focus</li> <li>Bevel Fly Scan Auto Focus</li> </ul>
Auto Focus	One click autofocus, as quick as 0.3-2 seconds for each focus, focusing accuracy and speed are optional
<b>2DF Version</b> <b>(2DB + Below Functions, For XYZ Stage + 3C Computer)</b>	
2D Fusion Scan	4 kinds of auto focus stitching modes up and down, with Z-axis motorized, you can focus on the inclined plane and the concave-convex surface layer by layer along the Z axis to find the correct focal plane, or after the depth of field fusion of multi-layer images, then scan and stitch into a clear full frame 2D images, especially suitable for complex industrial inspection, special slice observation and other fields <ul style="list-style-type: none"> <li>Up/Down Scan, Fast</li> <li>Up/Down Scan, Middle</li> <li>Up/Down Scan, Fine</li> <li>Up/Down Scan, Fusion</li> </ul>
Depth Fusion	The innovative design of high-quality depth synthesis can easily do 200~500 layers of super depth of field superposition and fusion in a short period of time. The software makes intelligent judgment on abnormal high and low points, scans with full coverage, and obtains full-frame clear focus pictures
Auto Edge Selection	When the measurement point manually selected by the mouse is deviated on the screen, the software can automatically detect the edge of the target and automatically correct the measurement point to the edge to eliminate human error and improve the efficiency of measurement range selection
<b>3D Version</b> <b>(2DF + Below Functions, For XYZ Stage + 3C Computer)</b>	
3D Scan	3D stitching mode, which can automatically focus on uneven objects, take pictures at different heights, obtain a full-frame clear 2D image composed of all clearly focused images, and stitch all focused image together to form a 3D image, and retain all the 3D measurement data of the observed object. <ul style="list-style-type: none"> <li>3D Stitching</li> </ul>
3D Image View	The saved 3D image can be opened at any time, controlled by the mouse to rotate freely, zoom in and out, open the ruler, color identification and other auxiliary tools, which is convenient to visually observe the 2D surface shape and 3D structure of the object from any angle, and thoroughly and clearly understand the observed object
3D Measurement	The 3D image also saves all the three-dimensional measurement data of the observed object, and supports any measurement of the observed object later, including the height, depth, length, roughness, convex area, concave area, convex volume, concave volume, etc.



3D Image Comparision	Two 3D images can be opened at the same time, synchronously rotated, zoomed in and out, compared and analyzed, and the comparison results such as height difference and shape difference can be automatically displayed through color identification
3D Manual Stitching	Support manual stage models, only need to manually lift the stage, the software automatically scans and takes pictures and stitches to form 3D images, upgrade manual stage model to do semi-automatic 3D scanning and stitching work.
Multi Files Comparison	Multiple files can be opened at once for cross-section, volume, area, flatness, roughness measurements, and more. Even if there are multiple evaluation samples, analysis can be performed instantaneously under the same conditions. It is possible to see at a glance where and what differences exist, such as changes in shape due to prototypes with different manufacturing conditions or wear. Not only can measurement work be significantly reduced, but evaluation errors caused by deviations in measurement conditions can also be prevented.。
<b>CF Version</b> <b>Customized Function Module For Special Observation</b>	
HDR	Acquires multiple ultra-clear images using a single wavelength of light and images with different shutter speeds, and turns them into 1 image with high grayscale data. Achieved unprecedented high-definition, high-contrast observation
DIC	The automatic turret of the six-hole objective lens, combined with the adjustment of the DIC prism, can make the height difference of the objective lens surface produce obvious relief effect, greatly improve the contrast of the image, and facilitate the user to analyze efficiently and accurately. Combined with polarized light observation, DIC can reflect the smallest surface morphology differences as brightness differences, and can display perfect images even for low-contrast, multi-phase samples and reflective materials.
Cell Count & Analysis	Through the automatic focusing acquisition method, high-definition scanning and splicing images of multiple areas are simultaneously obtained, and the number, concentration, diameter, and area of cells are statistically analyzed. The speed is fast and the identification is accurate.
Metallurgical Analysis	Using automatic image stitching, the image is analyzed through image enhancement, contrast adjustment, scratch processing, image correction, multi-region image segmentation, morphological processing, image annotation, and layer merging processing methods. It is easy to use and concise, and the measurement is accurate and reliable.
Cleanliness Analysis	Cleanliness analysis can be performed according to standards such as ISO Standard 16232, VDA 19.1-2015, ISO 16232, ISO4406 and ISO 4407. At the same time, it supports user-defined rating standard rules. Divide a large area into multiple areas to shoot and analyze them individually, and you can deal with a wide range of cleanliness analysis. The number of particles extracted and the cleanliness class can be displayed for each largest diameter class (B to K). Also provides height information for selected particles.
Vickers/Knoo Hardness Test Auto Analysis	Efficient and fast panorama scanning, diversified path planning, automatic continuous loading, focusing, and measurement are convenient for users to obtain accurate measurement results and greatly improve work efficiency.
Brinell Hardness Tester Analysis	One-Click automatic identification function is significantly ahead of the existing mainstream Brinell hardness tester software products.
Porosity Measurement	The system complies with VW50097, VW50093, VDG_P202 standards, and the whole image is obtained by panoramic stitching for analysis, so that the porosity measurement can obtain more reliable results in the entire analysis area.
Grain Size Analysis	According to JIS standard G0551 or ASTM standard E1382, the measurement line can select [vertical line], [horizontal line], [diagonal line], [multiple circles] to measure the crystals on test line.
One Click Auto Measurement	Multiple measurement items can be saved as templates, the software intelligently matches similar shapes, removes redundant targets or separates overlapping targets, and automatically performs unified measurement, counting and analysis for multiple targets with one click
Max Area Measurement	Just use the mouse to specify the measurement range, the software automatically detects the edge of the object and selects the measurement area, you can add or delete measurement areas at will, and measure the largest area of any complex shape by automatic edge recognition instead of manual precise positioning



## Maxcope Series Model



**M12.5850**



**M12.5810**



**M11.5805**



**M16.5850**



**M16.5810**



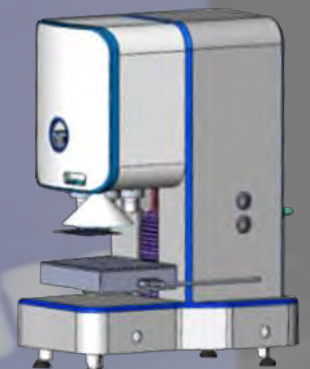
**M11.5810**



**M13.5850**



**M30.5810**



**M20.5850**

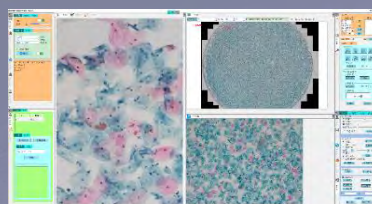


## Maxcope Software Versions



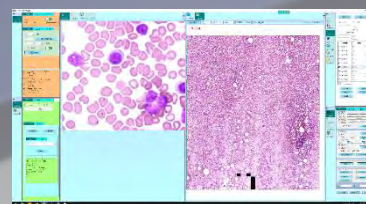
**2D**

X/Y Motorized  
2D Plane Scan



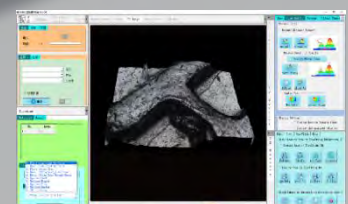
**2DB**

X/Y/Z Motorized  
2D Bevel Scan



**2DF**

X/Y/Z Motorized  
2D Fusion Scan



**3D**

X/Y/Z Motorized  
3D Scan



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MICROSCOPE IS OUR FOCUS

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