Your microscopes for your biomedical laboratory.

ZEISS

Seeing beyond

www.zeiss.com/micro/applications

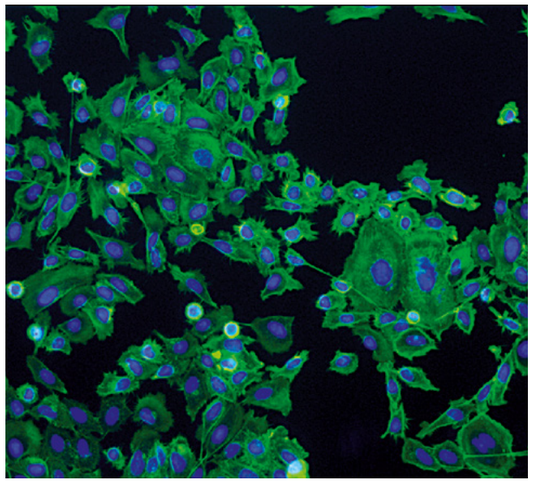
Your microscopes for increased efficiency in the lab.

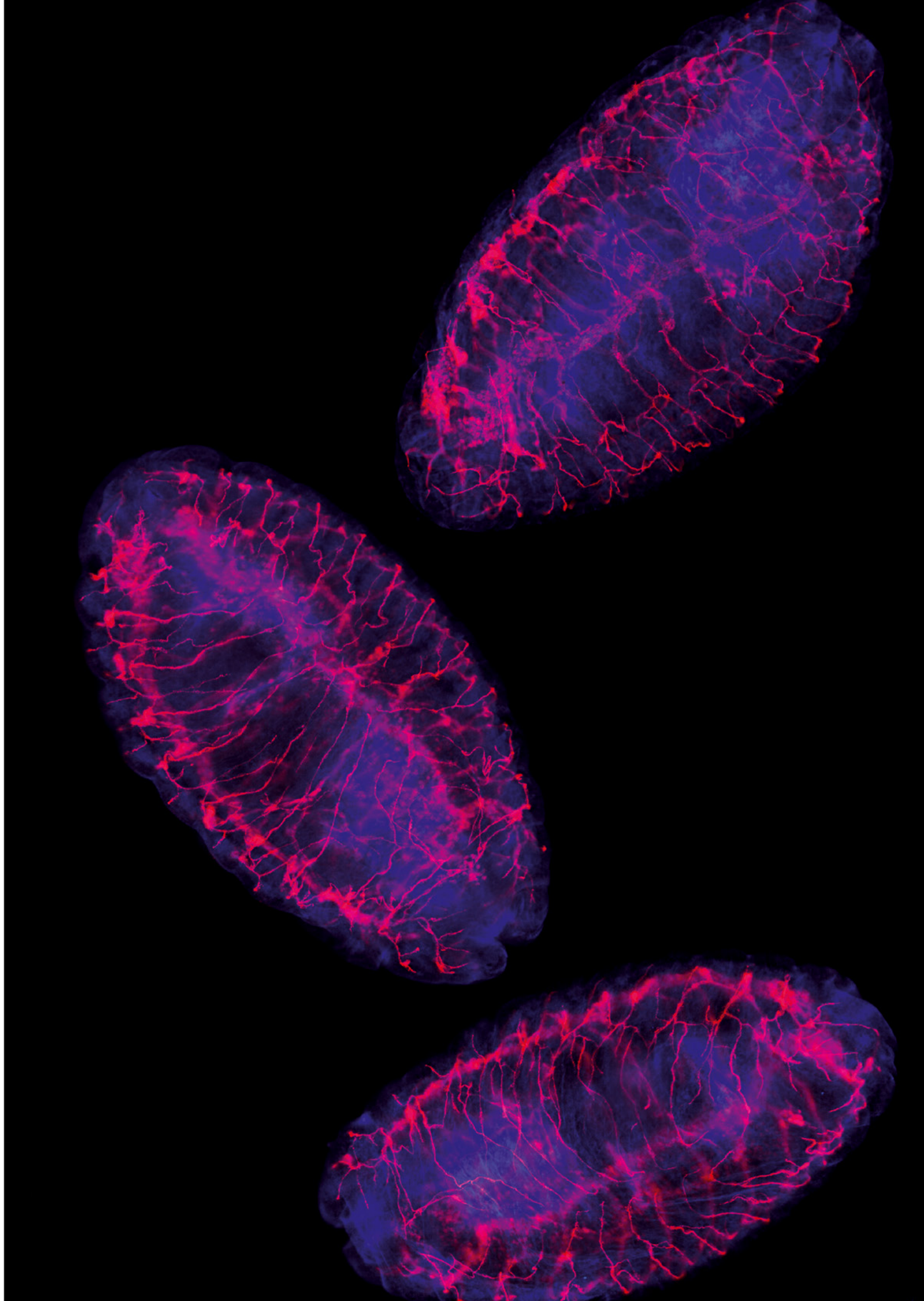
Enjoy the convenience for your daily checks, every day. Choose a sturdy microscope that is easy to use and has a long life. Make the best of your tuition and work with ZEISS microscope systems.

Use a microscope to investigate cells and body fluids in your laboratory. You prepare, manipulate, or document human, plant, or animal organisms, often for several hours at a time. You assess the quantity, type, and characteristics of blood cells.

You need convenient and efficient solutions. You need to easily operate your microscope and expect excellent optical performance. Does your microscope need to fit into a restricted space? Enjoy the convenience of ZEISS laboratory microscopes for your daily checks, every day.

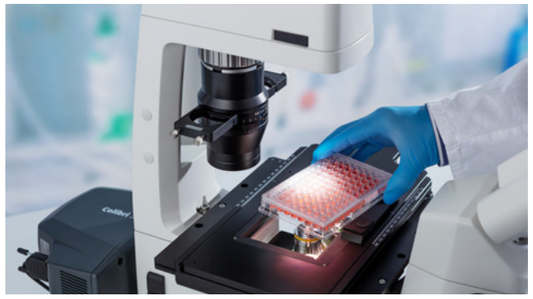
These ergonomically designed microscopes are so flexible that they adapt to you and your working procedures. They speed up your daily routines. And they have an outstanding price–performance ratio.





Select your system according to your requirements.

Whether you use your microscope from time to time or for your daily laboratory investigations, your experience and knowledge grow from day to day. Of course, your microscope has always to perform reliably and should be easy to use. ZEISS microscopes have been optimized for use in your biomedical laboratory. The systems make it easier for you to efficiently apply your knowledge and methods on a daily basis.



Stereo Microscopes and Zoom Microscopes

ZEISS Stemi 305
ZEISS Stemi 508
ZEISS SteREO Discovery.V8
ZEISS Axio Zoom.V16

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Upright Microscopes

ZEISS Primostar 3
ZEISS Primostar 3 iLED
ZEISS Axiolab 5
ZEISS Axioscope 5
ZEISS Axio Imager

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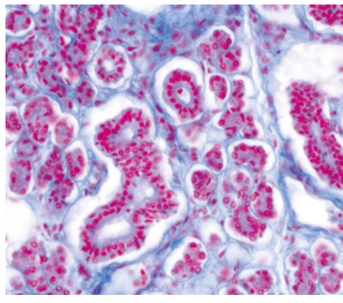

Inverted Microscopes

ZEISS Primovert
ZEISS Axiovert 5
ZEISS Axiovert 5 digital
ZEISS Axio Observer

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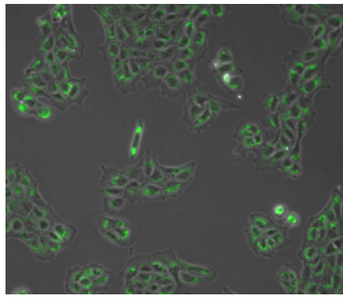

Digital Documentation

ZEISS Labscope
ZEISS ZEN core
ZEISS Axiocam
ZEISS Mutlidiscussion

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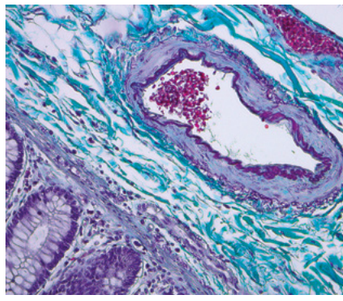
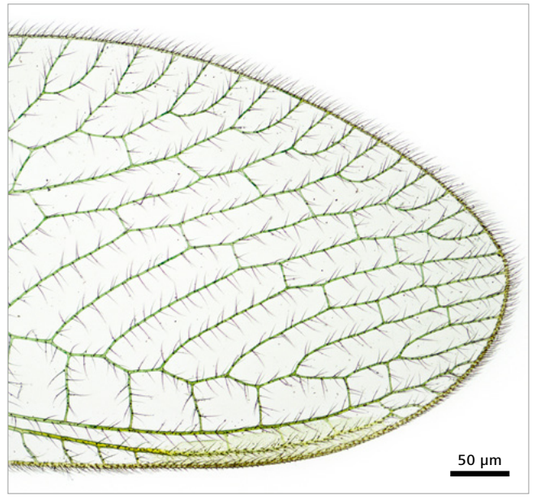


Stereo Microscopes and Zoom Microscopes
Brilliant 3D impressions with good depth of field.

With these microscopes, you can observe your large or living samples nondestructively and without needing complex preparation. Zooming smoothly, you can adjust the magnification to your object and analyze its morphology. In the lower overview magnification, you can screen and sort your samples. Then, with higher magnification, you can effortlessly analyze details and prepare and manipulate the samples thanks to a large working distance that enables good access to them.

ZEISS Stemi 305

Compact size, big impact: your stereo microscope with integrated illumination and documentation.



Wing of Chrisopidae; transmitted light brightfield

Royal fern, sori and sporangia; spot K LED, oblique light, zoom 2.0×

Stemi 305 is your compact Greenough stereo microscope with 5:1 zoom. Equally at home in the biology classroom, research lab or on the industrial shop floor. Observe your samples as they are: three dimensional and crisp in contrast with no preparation required. Then share your images, whenever you want.

Profit from an easy-to-use microscope, where everything is integrated: long-life LED illumination, reflected and transmitted light and documentation. Stemi 305 makes documentation easy and affordable. Simply snap your images with the integrated 1.2 Megapixel Wi-Fi camera and share them using Labscope, the iPad imaging app. Or opt for the conventional phototube to have access to all Axiocam cameras and free ZEN lite imaging software.

Configured to Your Requirements

Microscopes
Stemi 305
Stemi 305 trino with phototube (fixed division 50/50)
Stemi 305 cam with integrated camera

Stands
Stand K, stand K MAT, stand K EDU, stand K LAB,
Boom stands: stand A, stand U with tilting arm

Illumination Techniques
Reflected light, transmitted light and variable mixed light
Brightfield, darkfield and oblique light, polarization

Illumination
Reflected light: spot, double spot, ring light, near vertical, polarization
Transmitted light: homogeneous brightfield, darkfield, oblique light with relief contrast, polarization

Accessories
Eyepieces and interchangeable front optics, eyepiece reticles, fiberoptic cold-light sources with various light guides, stages, polarization accessories

Simpler. More Intelligent. More Integrated.

- Stemi 305 integrates everything you need. This compact Greenough stereo microscope comes without additional boxes and cables.
- With the microscope camera already on board, you're prepared to save your results, share your images and collaborate on projects with friends, colleagues and classmates.
- An LED illumination is already integrated in stands K EDU/ LAB/MAT and provides reflected, oblique and transmitted light. Easily select and mix the integrated LED illuminations such as vertical and oblique reflected light, so as transmitted light.
- Stemi 305 comes with two options for documentation. Choose the conventional phototube and have access to all Axiocam microscope cameras.
- With the iPad imaging app Labscope you create your own digital classroom and share your images.
- Stemi 305 microscope sets for education, lab and industry ensure optimized object illumination for your application.

Created for Your Applications

- In your practical botanical work, you investigate the morphology of plants' organs. Your zoological studies deal with worms, snails, spiders, frogs, crabs, eggs, and larvae.
- As a fungus expert, you investigate the macroscopic characteristics of the fruiting bodies of large fungi to differentiate between edible mushrooms and inedible look-alikes. The Stemi 305 large working distance allows you to examine whole mushrooms without the need for extensive preparation.
- Are you a veterinarian who carries out investigations and does surgery? Then you will particularly appreciate the shadow-free, homogeneous illumination provided by Stemi 305 as well as the flexible alignment of the microscope with stand U with tilting arm.

ZEISS Stemi 508

Your apochromatic stereo microscope with 8:1 zoom for excellent image contrast and color accuracy.

Powdery mildew on Norway maple, cleistothecia, Spot K LED, oblique reflected light, zoom 2.0×

Tick, segmentable ring light K LED, half circle mode, zoom 1.0×

Stemi 508 is compact, reliable and equipped with optics and mechanics designed for heavy workloads. With the large 36 mm object field you always keep the overview of your sample. The 8:1 zoom then allows to bring details up to 50× magnification. You even have larger samples? Add interchangeable optics and observe an area of up to 122 mm, making Stemi 508 a top perin its class. Stemi 508 offers better ergonomics than any other Greenough-type stereo microscope: The low viewing angle of 35° lets you keep a relaxed posture even after hours of work.

With Stemi 508 you observe and document your samples exactly as they are: rich in detail, sharp in focus and free from distortion or color fringes. Stemi 508 is your robust all-rounder for everyday lab work and industrial inspections: accurate, ergonomic – and always easy to use.

Configured to Your Requirements

Microscopes
Stemi 508
Stemi 508 doc with phototube and (100/0 switchover)

Stands
Stand K, stand K MAT, stand K EDU, stand K LAB, stand N
Boom stands: stand A, SDA and stand U with tilting arm

Illumination Techniques
Reflected light, transmitted light and variable mixed light
Brightfield, darkfield and oblique light, polarization

Illumination
Reflected light: light guides for spot, ring, line, vertical, diffuser, and area illumination, direct LED spots and segment ring lights
Transmitted light: brightfield, darkfield, oblique light with relief contrast and polarization option

Accessories
Interchangeable eyepieces and front optics, eyepiece reticles, camera adapter, cold-light sources with various light guides, gliding stage, rotating stage, ball-and-socket stage, polarization accessories

Simpler. More Intelligent. More Integrated.

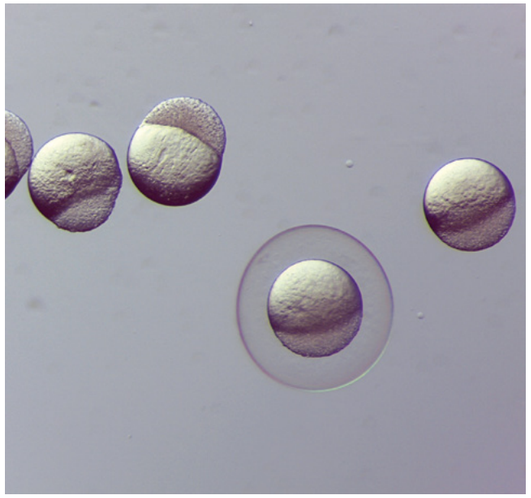
- Thanks to their excellent optics, Stemi 508 stereo microscopes provide a crisp and highly resolved threedimensional image, sharp in focus and free of distortions or color fringes.
- Enjoy the 8:1 zoom range and observe even minute structures. Zoom in on details, either continuously or reproducibly by adding click stops. Due to mechanical corrected zoom curves and precize zoom mechanics, the image stays sharp in each zoom position.
- The large field of view lets you overview an object area larger than 35 mm in diameter. The 0.3× supplementary lens even expands this to 123 mm.
- Stemi 508 doc always comes with camera adapter 0.5× to connect Axiocam microscope cameras.
- Configure exactly the stereo microscope you require – select from stands, mounting brackets and stages. A large range of fiberoptic or direct LED accessories allow various illumination contrasts in reflected and transmitted light, such as brightfield, darkfield, oblique light and polarization.

Created for Your Applications

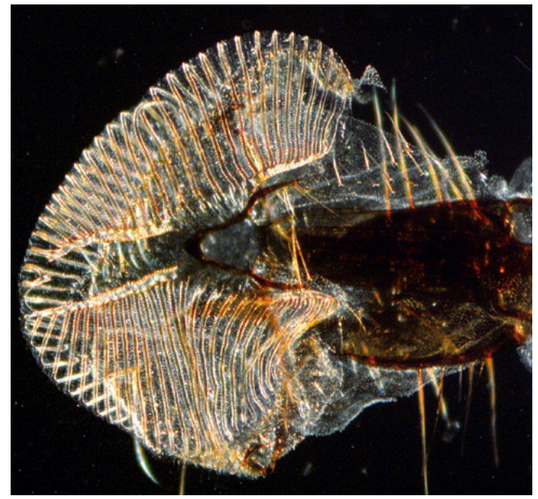
- You work in developmental biology with model organisms such as *Drosophila, C. Elegans, or Xenopus*. You assess, select, and prepare eggs, larvae, and embryos using micromanipulators.
- You are an entomologist who identifies insects, sometimes in the field – for example to map biotopes.
- You look for and classify horse or cattle embryos for subsequent transfer or for deep freezing for breeding purposes. Then you need high-contrast oblique transmitted light.
- Do you study, compare, and document plants from your herbarium? Then, for your larger samples, you will need a boom stand, a large working distance, and a maximum field of view.
- You look for and identify macroparasites such as ticks, fleas, and lice, as well as their eggs and larvae.

ZEISS SteREO Discovery.V8

Acquire brilliant, high-contrast, three-dimensional images.



Zebra fish embryos, four hours after fertilization, obliquely illuminated in transmitted light brightfield, magnification: 25× (as seen in the eyepiece)



Housefly mouthparts, obliquely illuminated in transmitted light darkfield, magnification: 80×

Configured to Your Requirements

SteREO Discovery.V8 is equipped with open interfaces and is completely integrated into the ZEISS system. Its modular design and extensive accessories offer you a variety of options to set up your workplace to your exact requirements. You can configure your microscope as a manual microscope for the preparation of specimens, as a powerful tool for fluorescent screening with easy-to-use documentation, or as a largely motorized system with ergonomic operation and imaging options.

The impressive stereoscopic image helps you to better observe, understand, and manipulate your specimens. You get a high-resolution, high-contrast, and apochromatically corrected microscopic image – that has sharp edges over the entire field of view and is always in focus when zooming. With its 8× zoom, you can quickly change from the overview down to the magnified detail. Add in click stops to the continuous zoom and you can easily reproduce ten discrete levels of magnification so that you can correctly scale your images.

Microscopes
SteREO Discovery.V8 (manual)

Illumination Techniques
Brightfield, darkfield, oblique light, polarization, fluorescence

Illumination
Reflected light: fiber-optic cold-light sources with spot, ring, line, vertical, diffuser, area, and coaxial illumination, LED ring lights with a segment function
Transmitted light: fiber-optic setup 450 with sliding mirror, low-profile LED setup 300

Accessories
Interchangeable lenses, observation and intermediate tubes, additional viewer attachments, illumination, manual and motor-driven stands, cameras, software modules to document images and for image processing

Simpler. More Intelligent. More Integrated.

- The intermediate LED tubes for fluorescence have been designed for screening tasks. They are high performance, robust, and easy to use. For this, they combine Achromat S lenses with high transmission.
- With the PlanApo S objective lenses, you get a level image with sharp edges and no distortion or color fringing.
- The 300 and 450 stands ensure vibration-free 3D viewing – even at high magnification.
- Choose between the variably adjustable fiber-optic transmitted light 450 unit and the especially low-profile 300 LED unit.
  Both units offer brightfield, darkfield, oblique-light, and polarization contrast.
- ZEISS cold-light sources provide intense light that is free from infrared to prevent damage to your sample. Long-life LEDs make lamp changes a thing of the past. A wide spectrum of light guides guarantees that your specimens' structures are optimally emphasized.
- In macroscope mode, you observe your specimen vertically through the right-hand stereo channel. You can produce z-stacks that are free from parallax errors and with increased depth of field.

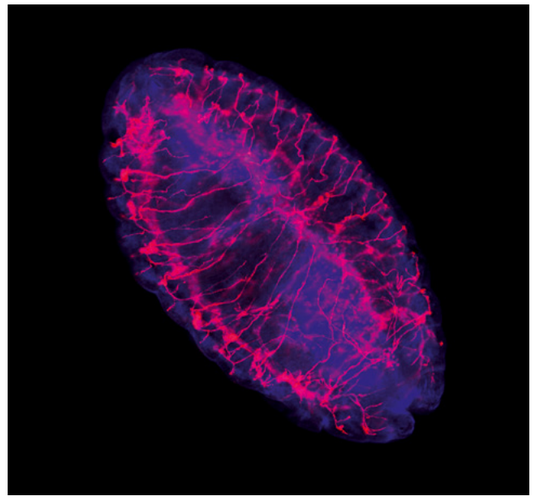
Created for Your Applications

- You work in embryology and prepare model organisms for more extensive imaging using laser scanning microscopes. Then the 5–45° ergotubes ensure that your working posture is ergonomic.
- You can document the embryonic growth of your zebra fish with the time-lapse module in the ZEN imaging software.
- You assess the health of plants or seeds, or you identify pathogens and record their incidence. When investigating whole plants, you will benefit for the large focusing range and the large sample space.
- In their biology classes, your students can draw plants and animals using drawing-tube attachment S. You can teach the preparation of samples or monitor it in 3D with the additional viewer attachment S.
- With SteREO Discovery.V8, you can isolate and prepare oocytes and embryos.
- In the forensic department, with the plan apochromatic lens, you can compare fibers and hairs with no color tints.
- Your task is restoration of precious museum artefacts? SteREO Discovery.V8 is an essential tool in restoration of museums collections to preserve Cultural Heritage for future generations.

ZEISS Axio Zoom.V16

Your zoom microscope for high resolution in large fields.

Tick (Ixodida) from below, objective lens PlanApo Z 1×/0.25 FWD 60 mm, autofluorescence, EDF



Fruit fly larva (Drosophila), objective lens PlanNeoFluar Z 2.3×/0.57 FWD 10 mm, multiple fluorescence

Axio Zoom.V16 offers you a succesful combination of a large field of view, zoom, and working distance as in a stereo microscope together with the high resolution of a light microscope.

With the Axio Zoom.V16 zoom microscope, thanks to its double-sized basic aperture compared to powerful CMO stereo microscopes, you benefit from a resolution that is 2.5× higher, as well as fluorescence that is 10× brighter in comparable fields of view. As needed, you can quickly and easily switch in the stereoscopic image.

Configured to Your Requirements

Microscopes
Axio Zoom.V16 (manual focus)
Axio Zoom.V16 (motor-driven focus)

Illumination Techniques
Brightfield, darkfield, relief contrast with reflected, transmitted,
and mixed light, polarization, fluorescence

Illumination
Reflected light: fiber-optic cold-light sources with spot, ring, line, vertical, diffuser, area, and coaxial illumination with switchable relief illumination, LED ring lights with a segment function
Transmitted light: fiber-optic setup 450 with sliding mirror, low-profile LED setup 300

Accessories
Interchangeable lenses (objective lenses, eyepieces), observation and intermediate tubes, manual and motor-driven stands, manual and motor-driven stages, cameras and software modules to document images and for image processing

Simpler. More Intelligent. More Integrated.

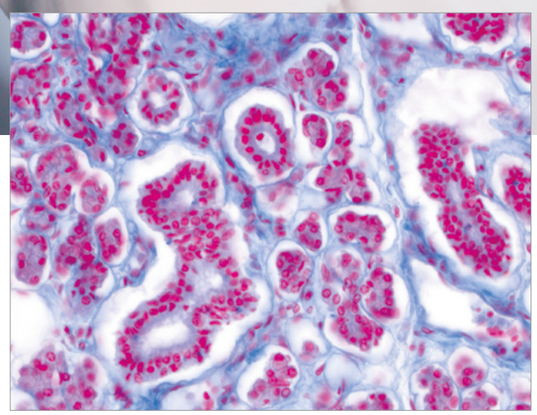
- With a 16× zoom and a basic aperture of 0.25 (with a 1× objective lens), with Axio Zoom.V16 you will benefit from what is currently the most powerful available stereo or zoom microscope.
- Axio Zoom.V16 offers you a high resolution of 0.3 µm in a large field of 1.6 mm.
- Its patented eZoom allows you to choose between optimized zoom modes for viewing through the eyepiece, for fluorescent applications, or for the documentation of images.
- With eZoom, you get reproducible magnifications with accuracy of over 99%.
- Take advantage of the intelligence of the 450 mot transmitted-light module. When zooming in *Best Mode*, you get an image that is automatically optimized for contrast and brightness, while taking account of the microscope's current state.

Created for Your Applications

- Use Axio Zoom.V16 when you need more resolution in larger fields.
- You benefit from the significantly higher aperture if, with image processing software, you manage to add value to the information in the image compared to the classical view through the eyepiece.
- Axio Zoom.V16 offers you high optical performance together with large working distances, which are of particular importance when manipulating your specimen. As well as in museums collection restoration.
- Do you need to investigate model organisms and zoom from a large overview down into the smallest details of organs, tissues, and individual cells? Then Axio Zoom.V16 is your best choice.

Upright Microscopes

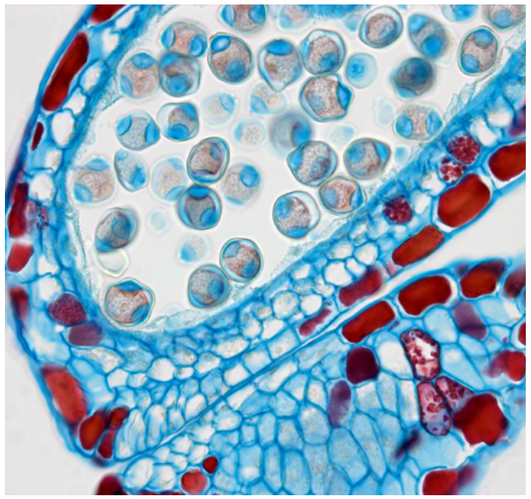
Use all contrast methods with reliable, compact microscopes.



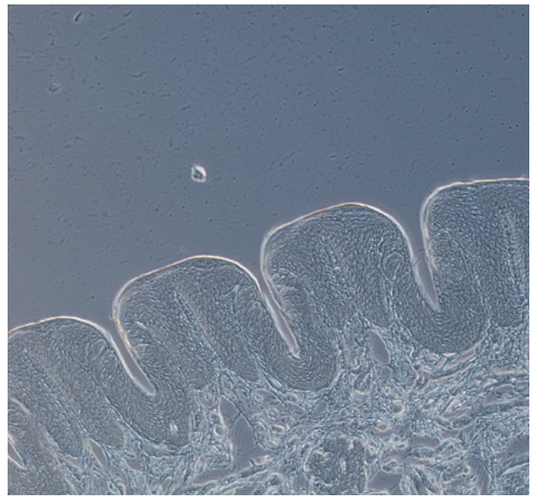
You can detect even the smallest details of your specimen with upright ZEISS microscopes thanks to their numerous contrasting techniques. Especially in clinical labs, you can rely on proven, reliable technology when assessing complete blood counts, smear tests, or sections. Ranging from robust educational microscopes and ergonomically designed laboratory units up to the most demanding platforms, upright microscopes from ZEISS enrich your daily work.

ZEISS Primostar 3

Your robust yet compact microscope for digital teaching and routine lab work



Corylus avallana in brightfield, magnification: 40×



Rabbit tongue, taste buds in phase contrast, magnification: 40×

In the classroom or in the routine lab, you need reliable microscopes that can take a lot of wear and tear. After all, you and your colleagues or students will be working long hours, often in cramped spaces. You need microscopes that will pay back your investment with smooth operation – day-to-day and year in, year out. Primostar 3 packs all of that into its sturdy metal frame. Yet this robust light microscope is also designed for maximum ease of use. For both productive learning and efficient lab work, students and staff alike will be free from the very beginning to focus on the essentials.

Primostar 3 is your reliable partner in microscopy – today and in years to come.

Configured to Your Requirements

Microscopes
Primostar 3 Fixed-Köhler
Primostar 3 Full-Köhler
Primostar 3 HD

Contrasting Techniques
Brightfield, darkfield, phase contrast, simple polarization contrast, fluorescence (optional)

Illumination
Transmitted light: HAL 30 (halogen), LED, illumination mirror
Reflected light: LED fluorescent reflected light

Accessories
Objective lenses (HF, Ph, D = 0, 100× dry), Ph-sliders, set of filters (blue, green, yellow), reflected light fluorescence attachments, sample slide kit, transmitted light mirror, eyepiece pointer, crossline micrometer, simple polarization accessory, transport and storage cases

Simpler. More Intelligent. More Integrated.

- Choose the best configuration for your tasks at hand from a number of pre-defined packages. A selection of objectives is already included.
- Plug in and start focusing on your work with the Fixed Köhler Primostar 3. Or train and learn the Köhler set-up with Primostar 3 Full-Köhler packages.
- Transmitted light brightfield, darkfield, simple polarization, phase contrast and fluorescence contrast are contrast techniques of choice. Just choose what your application asked for.
- Be ready to teach digital natives in a digital classroom with Primostar 3 HD.
- Benefit from the integrated 8.3 MPx HD with numerous interfaces for your flexible setup in your training courses environment (USB 3.0, HDMI, Ethernet, Wi-Fi compatible).
- Use free of charge Labscope App on your Windows PC or iOS device. Create images, movies, share your results with your peers and get ready for your first annotations.

Created for Your Applications

- You examine stained tissue sections using brightfield or fluorescent contrast. You look at unstained specimens with phase contrast. You analyze extremely fine structures such as diatoms using darkfield.
- As a botanist, you examine cross sections of plant stems.
- You examine tissue sections and blood smears from anatomy, pathology, hematology, and zoology to record symptoms.
- You examine cultivated plants for phytopathogenic agents or pests, or you track the development of illnesses and the course of diseases.
- You investigate the morphology of bacteria cells such as *Bacillus subtilis*, *Staphylococcus epidermidis*, *Micrococcus luteus* and *Escherichia coli*.

ZEISS Primostar 3 iLED

Your Fluorescence Microscope for Sputum Examination

ZEISS Primostar 3 iLED is your microscope to visualize small structures down to 0.2 – 5 µm. So you can even observe objects such as the rod-shaped *Mycobacterium tuberculosis*. The gold standard for sputum smear microscopy is Ziehl-Neelsen staining and brightfield light microscopy. According to WHO*, LED fluorescence microscopy is even more sensitive and less time-consuming, making it a real alternative to the conventional standard.

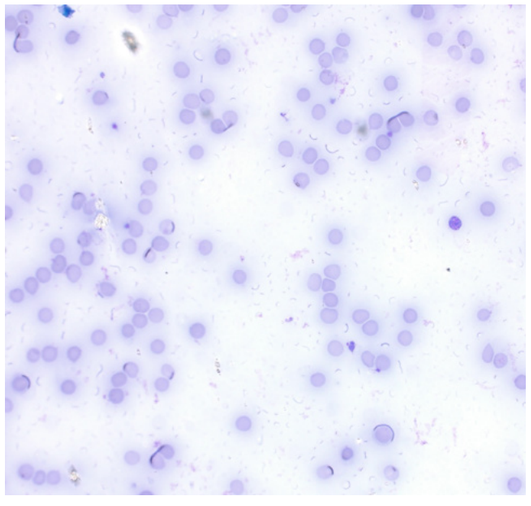
Configured to Your Requirements

Microscopes
Primostar 3 iLED (fixed Köhler) with reflected fluorescent illumination

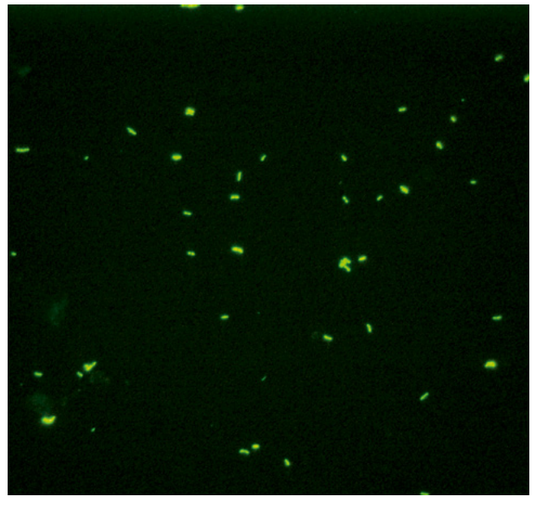
Contrasting Techniques
Brightfield, LED fluorescence

Illumination
- Transmitted light
- LED Reflected light
- Fluorescence module with 455 nm LED

Accessories
Objective D=0, eyecups; optional: transport box, power bank, illumination mirror, Axiocam microscope cameras



Representative image of mycobacterium tuberculosis, Ziehl-Neelsen stain: the mycobacteria stained purple are hard to see in a microscopic image



Representative image of mycobacterium tuberculosis visualized in fluorescence with auramine O. The mycobacteria are clearly visible as greenish yellow particles in front of a dark background

Simpler. More Intelligent. More Integrated.

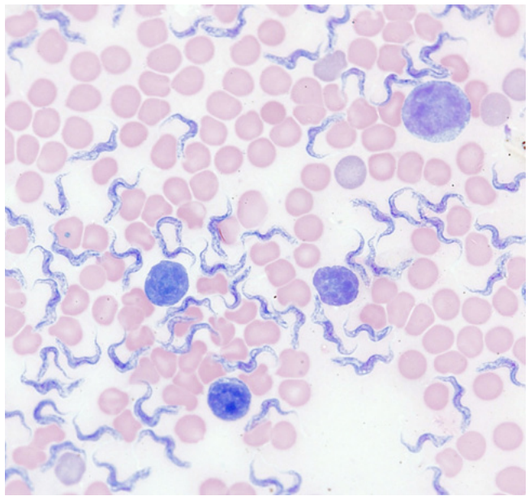
- It is easy to change between fluorescence and brightfield. You get images with outstanding contrast, especially when you work with samples colored with auramine-rhodamine stain.
- LED fluorescence is safe, energy-efficient, and easy to use. You neither have to wait for lamps to heat up or cool down, nor do you have to replace or adjust them.
- In areas without a power supply, you can use a power bank.
- With the ergonomic eyecups, you can get precise results even without a darkroom.
- If you are a customer from the public health services of those countries most heavily affected by tuberculosis, you can get Primostar 3 iLED at an especially low price.

Created for Your Applications

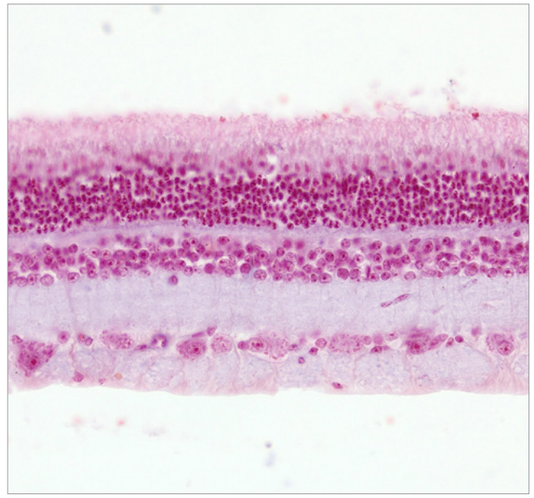
- You examine stained tissue sections using brightfield or fluorescent contrast. You look at unstained specimens with phase contrast. You analyze extremely fine structures such as diatoms using optional darkfield.
- As a botanist, you examine cross sections of plant stems.
- You examine tissue sections and blood smears from anatomy, pathology, hematology, and zoology to record symptoms.
- You examine cultivated plants for phytopathogenic agents or pests, or you track the development of illnesses and the course of diseases.
- You investigate the morphology of bacteria cells such as *Bacillus subtilis*, *Staphylococcus epidermidis*, *Micrococcus luteus* and *Escherichia coli*.

ZEISS Axiolab 5

Your smart microscope for more efficient routine lab work.



Blood smear, Giemsa staining, transmitted light brightfield, objective: Plan-Apochromat 63×/1.4



Rat retina, section, nuclear fast red, transmitted light brightfield, objective: Plan-Apochromat 20×/0.8

Axiolab 5 is made for the routine work that goes on every day in your lab. Its compact and ergonomic design saves space and makes for easy handling.

Axiolab 5 is a real team player. Combine it with Axiocam 208 color and take full advantage of the smart microscopy concept: you'll be experiencing a completely new form of digital documentation. Just focus your sample and press a single button for crisp images in true color. The digital image will look exactly like you see it through the eyepieces, with all the details and subtle color differences clearly visible.

Plus, Axiolab 5 automatically adds the correct scaling information to your images. You get all of this in a standalone operation, without needing a PC or any additional software. Save time, money and valuable lab space with Axiolab 5. Digital documentation has never been easier.

Configured to Your Requirements

Microscopes
Axiolab 5 (transmitted light)
Axiolab 5 (transmitted light and reflected light fluorescence)

Contrasting Techniques
Brightfield, darkfield, phase contrast, simple polarization, LED fluorescence

Illumination
Transmitted light:
- 35 W halogen illumination (optional)
- 10 W LED illumination

Reflected light:
- Up to 3 fluorescence LEDs

Accessories
Axiocam 208 color and Axiocam 202 mono microscope cameras, stages for left and right hand operation, ergotubes, multidiscussion equipment

Simpler. More Intelligent. More Integrated.

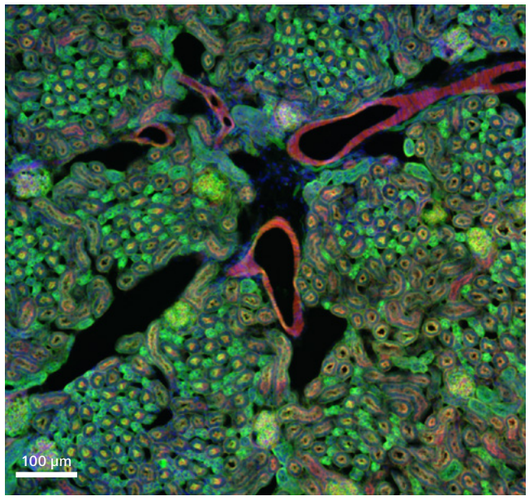
- Axiolab 5 offers you an easy handling, ergonomic user concept that's adapted to your lab routine. You can control the microscope and its attached camera without even changing your grip.
- To acquire an image, simply press the snap button right on the stand. Your smart microscope system then automatically adjusts the parameters for you and documents your sample precisely as you see it through the eyepieces – detail-rich and in true color. The correct scaling is always included automatically, even without a computer.
- LED fluorescence is safe, energy-efficient, and easy to use. You neither have to wait for lamps to heat up or cool down, nor do you have to replace or adjust them.
- Ergotubes and torque adaptable stage handle allow you to work in a comfortable position, even during extended use.
- With the multidiscussion equipment, all co-observers can see the same image with the same orientation.

Created for Your Applications

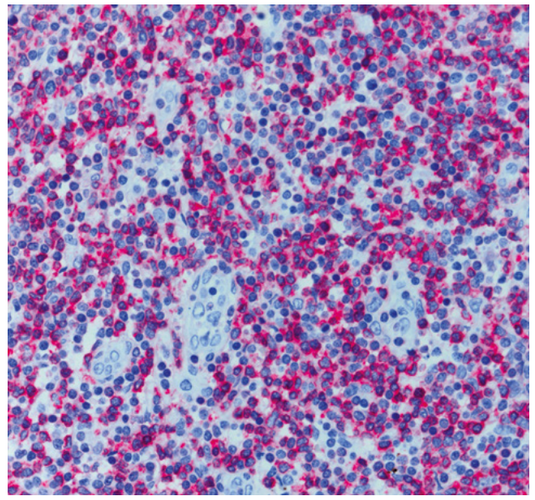
- With Axiolab 5, it is particularly easy for you to count white blood cells in brightfield, as you can reach all of the essential controls with one hand.
- In darkfield, you can recognize uncolored structures at a glance.
- Using polarization contrast, you can detect birefringent crystals, for example when visualizing gout.
- Using fluorescence contrast, you can examine heparinized blood for cytogenetic (chromosome analysis) and molecular cytogenetic investigations.
- In the laboratory, you can analyze body fluids, tissues, and excretions. You can do hematological analyses on the cell morphology of blood and tissue cells and can do hemostasis analyses for bleeding tendency or thrombophilia.
- In your IVF laboratory you use Axiolab 5 for enlarged visualization of sperm cells in brightfield or phase contrast.

ZEISS Axioscope 5

Your smart microscope for biomedical routine and research.



Mouse kidney in fluorescence, cryosection, AF 488 – WGA, AF 568 Phalloidin, DAPI, objective: Plan-Apochromat 20×/0.8



Histological specimen, CDx immunohistological stain; Red: immunoreactive antigens in cytoplasm; Blue: nuclear counterstaining Ziehl-Neelsen-Färbung, objective: EC Plan-Neofluar 63× / 0.95 Korr.

In the past, documenting samples with multiple fluorescent labels in your routine lab could be time consuming. To get best image quality, you needed to manually switch filters, adjust illumination intensities and exposure times and to snap each single channel image. For three different channels, this could sum up to 15 steps and clicks. With Smart Microscopy from ZEISS, this is a thing of the past.

Your Axioscope 5 with Axiocam 202 mono and Colibri 3 LED illumination take this workload from you. You don't even need to move your hands from the microscope stand anymore. All you have to do is focus and press Snap – and you're done! You can now concentrate on the essence of your job and let your Axioscope 5 work for you. You'll work more efficiently, save time and produce high contrast images with best image quality. What's more: this even works without any PC involved.

Configured to Your Requirements

Microscopes
Axioscope 5, transmitted light, LED
Axioscope 5, transmitted light, Hal 50
Axioscope 5, fluorescence

Contrasting Techniques
Transmitted light: brightfield, darkfield, DIC, PlasDIC, simple polarization, phase contrast
Reflected light: brightfield, darkfield, DIC, C-DIC, simple polarization, fluorescence

Illumination
Transmitted light:
- LED 10W, Hal 50, Hal 100

Reflected light, fluorescence:
- Colibri 3, HXP 120, and other

Accessories
Axiocam 208 color and Axiocam 202 mono microscope cameras, Colibri 3, XY stages, ergotubes und multidiscussion equipment

Simpler. More Intelligent. More Integrated.

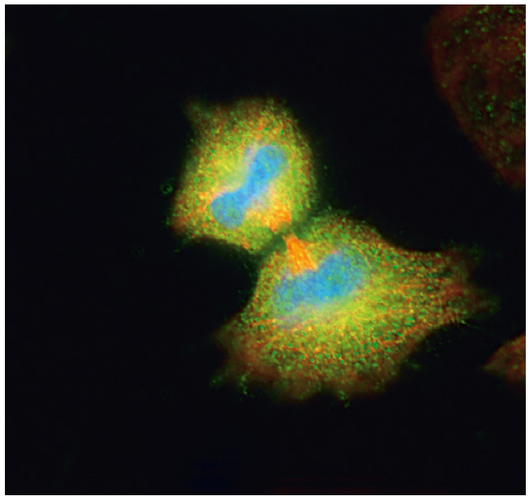
- Capture up to four fluorescence channels with just one click: the system automatically adjusts the exposure time, acquires the image, switches the channel and starts again. You get your overlayed multichannel fluorescence image including scale bar.
- Colibri 3 provides up to four fluorescence LEDs which can be individually controlled, directly from the stand.
- For transmitted light applications, the smart Axioscope 5 system makes automatic adjustments for brightness and white balance to keep digital documentation easy.
- Axioscope 5 uses its transmitted white light LED to provide powerful illumination with high color fidelity.
- With Axioscope 5 you can use a sheer variety of contrasting techniques for your applications.

Created for Your Applications

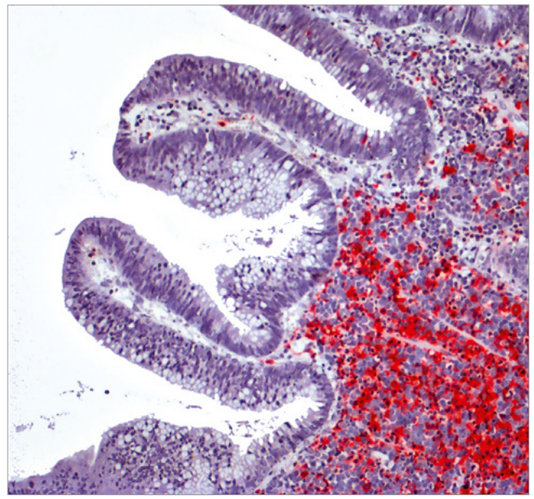
- You can carry out histological or pathohistological analyses of tissue sections in brightfield contrast.
- With polarization contrast, you can analyze foreign bodies and crystals in tissue and body fluids.
- You can examine stained mucosal cells in hematology, urology, and gynecology using brightfield and fluorescence.
- Perform multichannel fluorescence imaging of tissues and cells in your lab.

ZEISS Axio Imager 2

All contrasting techniques on a single imaging platform.



HeLa cells, mitotic phase; red: Alexa Fluor 594-DM1-alpha, green: Alexa Fluor 488-Mad2, blue: DAPI, objective lens: EC Plan-NEOFLUAR 100×/1.3 oil, Sample: courtesy of H.Y. Li and Y. Xheng, department of embryology at HHMI and CIW, Maryland, USA



Histological section; red: MPOX2, blue: nuclear counterstaining, objective lens: EC Epiplan-NEOFLUAR 10×/0.3, Sample: courtesy of A. Schmitt-Gräff, pathology department, Freiburg University, Germany

Axio Imager 2 supports your requirements – from brightfield observations and fluorescence light via polarization up to complex FISH applications. This system platform, with its modular architecture, is aimed at your growing needs. Application-specific components complement the solid fundamental characteristics of the Axio Imager 2 stand variants. See for yourself what the combination of outstanding optics, high resolution, and excellent contrast can do!

Configured to Your Requirements

Microscopes
Axio Imager.A2 (manual)
Axio Imager.A2 LED (manual, LED fixed Köhler illumination)
Axio Imager.D2 (partially motor-driven)
Axio Imager.M2p (partially motor-driven)

Contrasting Techniques
Transmitted light: brightfield, darkfield, DIC, polarization, phase contrast
Reflected light: brightfield, darkfield, DIC, C-DIC, fluorescence

Illumination
Transmitted light: DL 12 V 100 W HAL, 12 V LED
Reflected light: 12 V 100 W HAL, 12 V 100 W HBO, 12 V LED, 75 W XBO, VisiLED, microLED, Colibri 5/7

Accessories
LEDs with push-and-click modules, manual stages for left- and right hand operation, encoded and motorized stages, sample holders, binocular tubes with various viewing angles, camera tubes, multi-discussion equipment

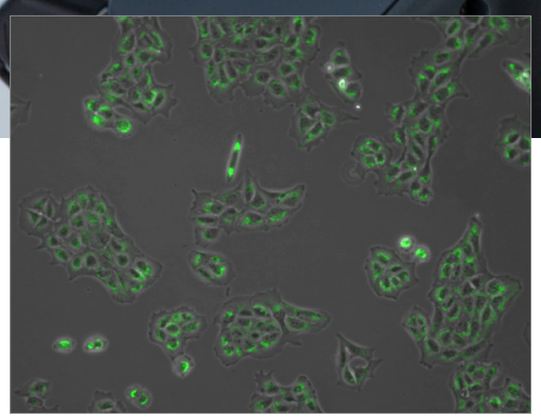
Simpler. More Intelligent. More Integrated.

- Axio Imager 2 impresses with its outstanding optics, perfect contrast and illumination.
- It evenly illuminates your specimens.
- Your Axio Imager 2 is equipped with a light manager for transmitted and reflected light. You benefit from a constant light impression at all magnifications and for all contrasting techniques.
- The stands for Axio Imager 2 family are coded and all details of the image acquisition, such as objective lens and magnification, are saved together with the image.
- Axio Imager.M2p is perfectly tailored for user-friendly operation. Thanks to the encoded nosepiece turret and convenient motorization such as automated parfocal correction, you can work efficiently with a high specimen rate.
- The motorization of Axio Imager 2 allows an ergonomical workflow and speeds up your work.

Created for Your Applications

- Axio Imager.A2 with LED illumination in connection with Achroplan or EC Plan-NEOFLUAR objective lenses is your ideal basic equipment for histology.
- Axio Imager 2 with polarization contrast is indispensable in showing debris in tissue, for example. Depending on the application, you can use fixed or rotating polarizers and analyzers, or even a lambda plate.
- In histology and anatomy, you benefit from excellent resolution, convincing colors in details and overviews, and the ability to quickly and precisely relocate important positions in the specimen. The EC Plan-NEOFLUAR and Plan-APOCHROMAT objective lenses in connection with motorized stages are ideally tailored for this.
- You can visualize parasites, bacteria, or clusters of viruses.
- You identify extrinsical particles.

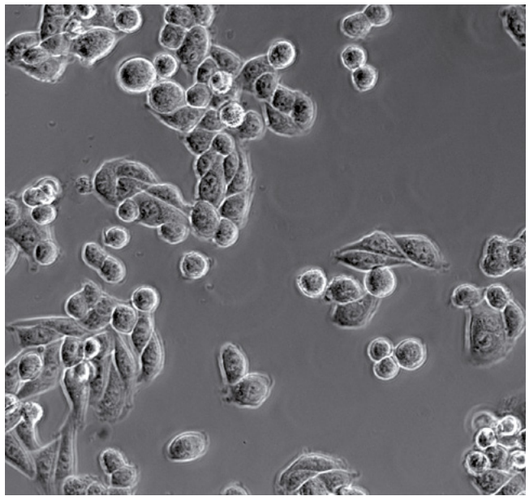
Inverted Microscopes
Living cells in focus.



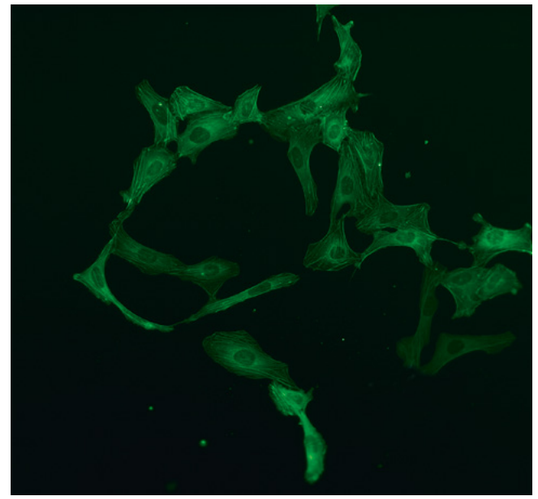
With inverted microscopes, you can use the large sample space between the stage and the illumination for your cells in petri dishes, well plates, or culture flasks. You will have enough space for your roller bottles and for micromanipulation. And all that together with contrasting techniques such as brightfield, phase contrast and fluorescence, that you need in your laboratory. Your ZEISS microscope is compact and focuses on the essentials.

ZEISS Primovert

Examine and assess your living cells – quickly and easily.



HeLa cells, phase contrast,
objective: LD Plan-ACHROMAT 20×/0.3 Ph2



U2OS cells expressing GFP, fluorescence contrast,
objective: Plan-ACHROMAT, 20×/0.4

Now you can study the morphography of living cells and evaluate their development with this compact inverted microscope from ZEISS. Primovert is perfectly suited to your cell culture laboratory.

It enables fast, efficient investigations of both unstained cells in phase contrast and GFP-labeled cells in fluorescence contrast. It fits straight into your laminar flow cabinet to work directly in a sterile environment. And it brings you a welcome degree of flexibility, too, with its integrated camera and the Labscope imaging app for iPad: observe your cells from outside the sterile working space and evaluate them with colleagues.

Configured to Your Requirements

Microscopes
Primovert
Primovert photo
Primovert HDcam
Primovert iLED

Contrasting Techniques
Brightfield, phase contrast, fluorescence

Illumination
HAL 30, LED

Accessories
Stage insert (glass or metal), holding frame for petri dishes, object guides, LD condensers, phase contrast slides, Plan-ACHROMAT and LD Plan-ACHROMAT objective lenses

Simpler. More Intelligent. More Integrated.

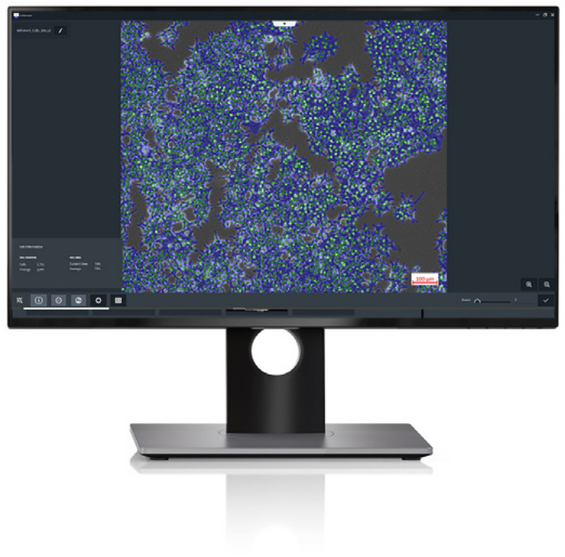
- Switch from phase contrast to fluorescence contrast to assess both undyed and GFP-labeled cells.
- The inverted microscope is compact and fits directly in your Laminar Flow Box – you work directly in the sterile environment.
- Your Primovert is immediately ready for use. You reactivate the microscope in stand-by mode directly at the stage. Primovert switches in walk-away mode automatically after 15 minutes off. This saves energy and increases the life of the light source.
- Primovert HDcam integrates a camera. Use your iPad and the free imaging app Labscope and discuss the image together in the team.
- Snap microscope images, annotate and create reports, and share them easily wirelessly with other.

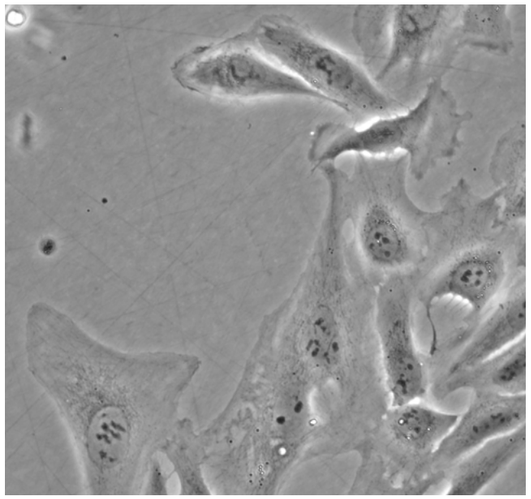
Created for Your Applications

- With phase contrast, you get high-contrast images of unstained cells. You can analyze the growth, morphology, and condition of living cells at a glance.
- Research the structure of plant cells and tissues, reproduction, growth, metabolic processes, and pathogens.
- You can do sterility tests.
- Examine cells before preparing protein, DNA, or RNA samples.
- Differentiate between types of cells and characterize cell lines.

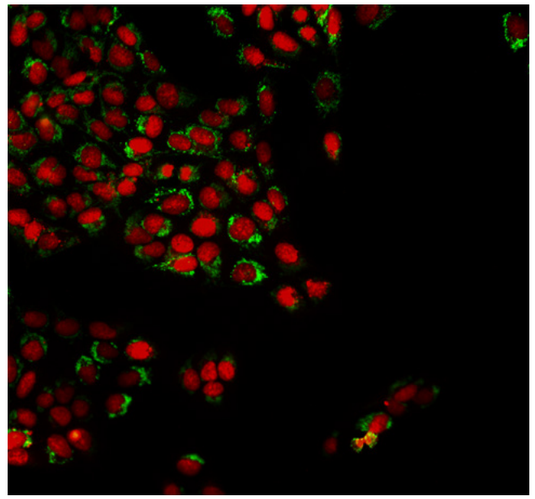
ZEISS Axiovert 5

Your smart microscope for cell culture and research.





U2OS cells in transmitted light, phase contrast.
Objective: LD A-Plan 40×/0.55 Ph 1



U2OS cells in multichannel fluorescence, 20×, Nucleus – NucRed, Mitochondria – MitoTracker green

Axiovert 5 brings smart microscopy into your cell culture lab. All you need to do is focus on your samples and workflow. Then simply push Snap to get crisp images for documentation.

Use all standard contrasting techniques in transmitted light and combine them with multichannel fluorescence to investigate your cell or tissue cultures. And when space is tight, you can even use this smart microscope as a standalone and save your images on USB. No extra computer or software needed.

Configured to Your Requirements

Microscopes
Axiovert 5 TL (transmitted light)
Axiovert 5 TL SCB (transmitted light, Smart Control Box)
Axiovert 5 TL FL SCB
(reflected fluorescent light, Smart Control Box)

Contrasting Techniques
Brightfield, phase contrast, PlasDIC, iHMC, DIC, fluorescence

Illumination
Transmitted light: White LED 10 W
Reflected light: Colibri 3, HXP 120, Colibri 5/7, Xylis and more

Accessories
- Light shield, Mounting frame K thermo plate, iHMC module, polarizer slider TL 90° rotatable
- Filter sets, aqua stop, condensor and more

Simpler. More Intelligent. More Integrated.

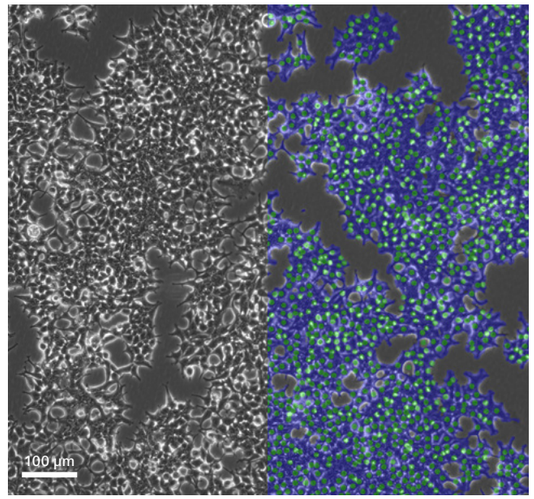
- Various contrasting techniques — DIC, iHMC and phase contrast as well as multichannel fluorescence — open up a huge diversity of applications.
- Without modifying the stand, you can switch freely between iHMC, PlasDIC and DIC as you investigate your samples.
- With Axiovert 5 your samples remain safe in gentle LED light. You profit from homogeneous illumination and freedom to align your sample.
- Axiovert 5 delivers excellent results with fast time to image. Simply focus your sample and press a single button to save a crisp image of your cell or tissue culture.
- For transmitted light and multichannel fluorescence images, this smart microscope automatically adjusts the settings and parameters for you.
- If lab space is limited, just get rid of the PC and all that additional software: use Axiovert 5 in standalone mode and control the microscope via the OSD menu.

Created for Your Applications

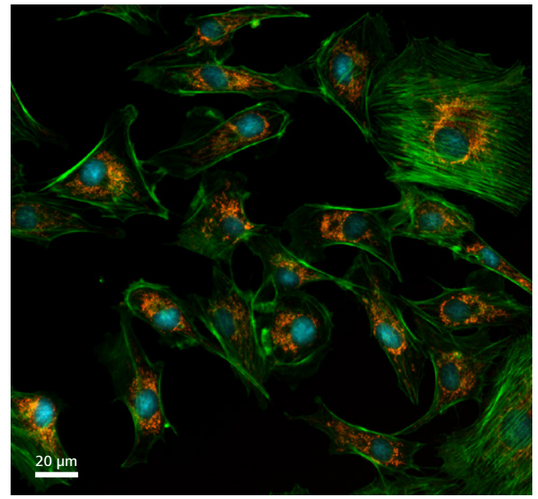
- Check the vitality of your cell cultures.
- Estimate the perfect timing for cell seeding.
- Check the efficiency of transfections.
- Capture high-quality multi-channel fluorescence images easily.

ZEISS Axiovert 5 digital

Your All-in-One Cell Imaging System.



Cell counting and cell confluency at a glance with ZEISS Labscope



BPAE cells in multichannel fluorescence, 40×

Artificial Intelligence (AI) is already helping us with our daily lives, from automated driving and home assistants to securing smartphones with facial recognition. Axiovert 5 digital brings AI into your cell lab to ease your daily work. It will make your processes more efficient and your results more reproducible. Stay relaxed, even when there is a lot going on around you. Just push a single button and your results will appear in real time.

Configured to Your Requirements

Microscopes
Axiovert 5 digital (mono)
Axiovert 5 digital (color)

Contrasting Techniques
Brightfield, phase contrast, fluorescence

Illumination
Transmitted light illumination with white LED 10 W
4 solid state fluorescence LEDs

Accessories
- Stage inserts
- Objectives, filter sets, FL-LEDs
- Aqua Stop II

Simpler. More Intelligent. More Integrated.

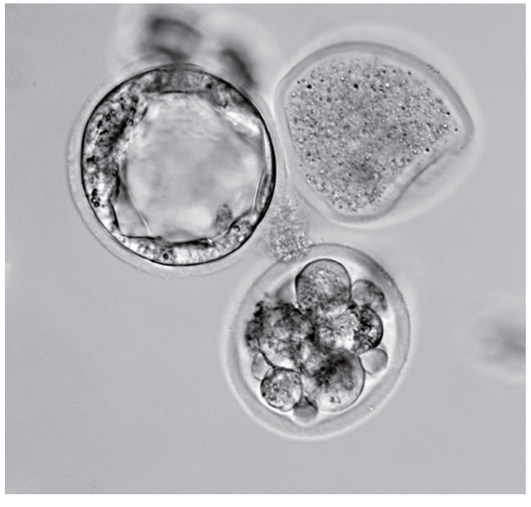
- Experience the full advantages of an all-in-one microscope system. Don’t worry about settings or adjustments – they’re already done. All you have to do is turn on your system and start working.
- Axiovert 5 digital uses artificial intelligence to optimally support daily workflows. Cell counting and cell confluency are automatically determined by readily available AI modules.
- This all-in-one imaging system comes with an intuitive operating concept. One click on the snap button is sufficient to trigger image and video acquisition as well as analysis.

Created for Your Applications

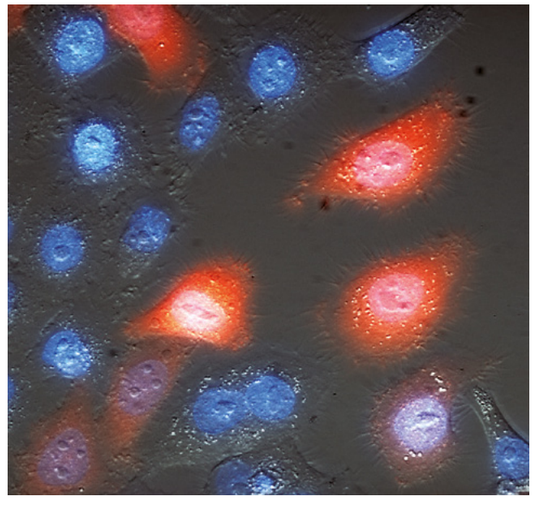
- Observe labeled living cells in your cell laboratory.
- Count cells to decide on cell proliferation and viability as well as the appropriate dilution values.
- Measure the cell confluency to decide on cell proliferation, viability, and the perfect timing to start transfections or when to passage your cells.
- Start today to improve the quality of your cell cultures and make your experiments more reproducible. Count cells automatically with AI.
- Document your fluorescent cells in publication-ready quality.

ZEISS Axio Observer

Observe. manipulate. and analyze.



Transgenic mouse embryos in various stages of development, PlasDIC, magnification: 40×, Sample: courtesy of Dr. Ropeter, Dragon-IVF, Dr. Michelmann, Gynecological Clinic Göttingen, and Ms. Buhtz, Göttingen University, Germany



HeLa cells, multi-color fluorescence in combination with DIC. Blue (HOECHST 33342): cell nucleus, red (DsRed): cytoplasm. Courtesy of H. Wolff, GSF Neuherberg, Germany

You observe, analyze, and manipulate living cells. Then Axio Observer is your inverse microscope platform for maximum flexibility. Its open architecture can be cost-effectively extended – from the base stand through to high-speed and laser-scanning microscopy or microdissection dimensions. There are not even any restrictions in adding external components to the system.

Configured to Your Requirements

Microscopes
Axio Observer 3
Axio Observer 5

Contrasting Techniques
Brightfield, phase contrast, PlasDIC, iHMC, DIC, fluorescence

Illumination
Transmitted light: halogen, LED
Reflected light: HBO 50, HBO 100, HXP 120 V, Colibri 5/7

Accessories
Binocular tubes, binocular camera tubes, binocular ergotubes, stages, manual and motor-driven stages, condensers, objective lenses, cameras, software, incubation components

Simpler. More Intelligent. More Integrated.

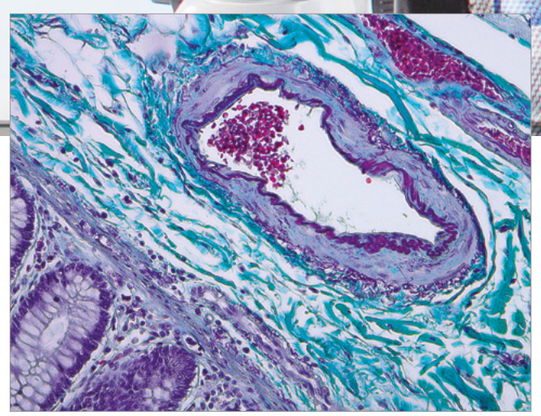
- The apochromatic fluorescence beam path ensures homogeneous intensity of fluorescence over the entire field of view. Colibri 5/7 light sources permit a fast LED change for fluorescent applications.
- Combine Axio Observer with manipulators, and together with PlasDIC or iHMC, you will have the perfect platform for the imaging of animal egg cells and embryos and for your work with stem cells.
- With the DIC contrasting technique, you can achieve the highest detail resolution and improved success rates – for example when assessing sperm.

Created for Your Applications

- Observe and mark cells using vital stains.
- You carry out series of experiments and need ocumentation and incubation.
- Compare images from different fluorescence channels and require uncompromisingly brilliant images.
- Carry out pronuclear injections working with transgenic animals.

Digital Documentation

Network your microscopes and document your results.

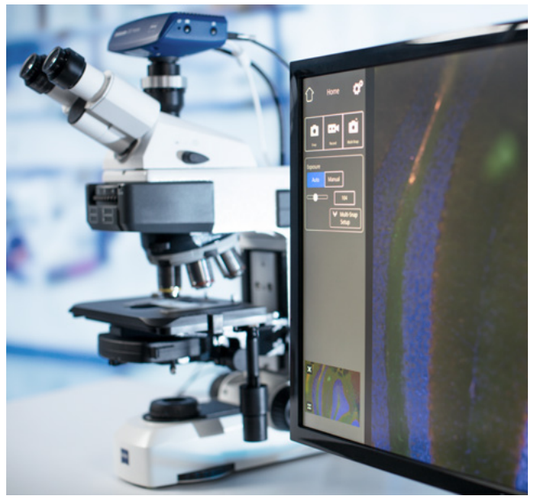


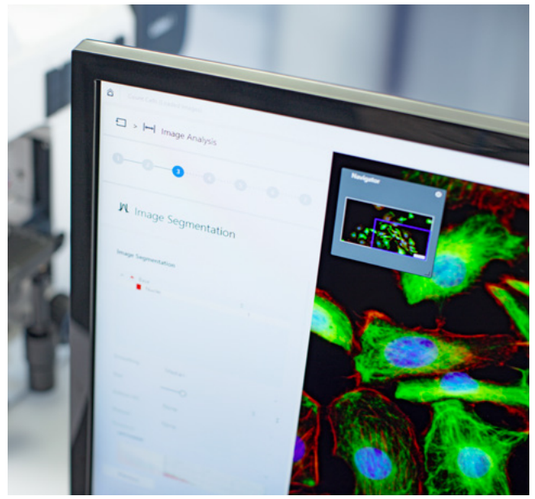
Document exactly what you see. Fast, easily to access and with brilliant image quality.
With the digital microscope cameras from ZEISS, you have the perfect tool for image acquisition and documenting your work. To display and edit your images, choose the imaging app Labscope. Using Labscope, you can connect several microscopes and digitize your classroom and easily take a look into your students' work.

ZEISS Microscope Software for Your Routine Laboratory

Get it done. Easy.

Decide for microscope software from ZEISS and simply get your work done. From super simple for basic image acquisition only, easy-to-use for standard imaging, up to customizable workflow solutions – choose the microscope software that fits exactly to your task: save time, reduce training expenses, and get your results faster.





On-screen Display (OSD)

Your choice for basic image acquisition

Focus. Snap. Done.

Your smart microscope camera Axiocam 208 color or Axiocam 202 mono facilitates image acquisition with your manual microscope greatly. The automatic functions require only minimal adjustments and – you don't even need a computer.

OSD is your perfect choice, if you:

- Need image acquisition only
- Have limited lab space and budget
- Want an easy-to-use user interface which does not require any training
- Don't want to deal with IT topics such as operating system updates
- Want to save your data on an USB-stick

ZEISS Labscope

Your standard for routine imaging

High quality images. Fast results. Fun to work with. With ZEISS Labscope you decide for an easy-to-use imaging software that fulfills all needs in your laboratory – from image acquisition, handy built-in measurement functions up to easy data sharing. And, you're free to use it with your Windows PC but also with your tablet or mobile phone.

Labscope is your preferred choice if you:

- Want impressive ease of use without compromizing functionality
- Need image acquisition, basic post-processing, annotation and measurement functions
- Work with manual microscopes and fluorescence
- Need access to multiple microscopes in a network
- Want a simple way to share and display images
- Occasionally need to scan whole slide images

ZEISS ZEN core

For customized repetitive workflows

ZEN core is your imaging software to handle application-specific routine workflows that can be individually defined. You can create and combine workbenches to create dedicated jobs that assist you through a defined flow of consecutive tasks. This ensures data repeatability and ease of use.

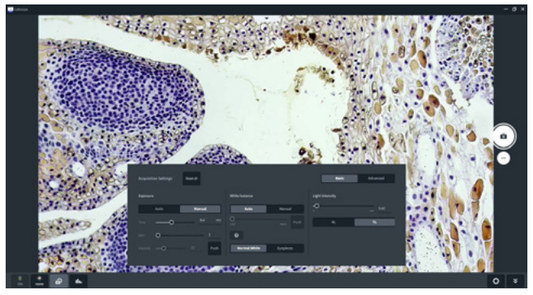
Decide for ZEN core if you:

- Need to control a motorized ZEISS microscope for higher automation
- Want to setup and use individually defined imaging workflows
- Need a GxP compatible solution
- Need to ensure data repeatability in a multi-user environment
- Want to perform multi-modal imaging, e.g. light and electron microscope with the same sample

ZEISS Labscope

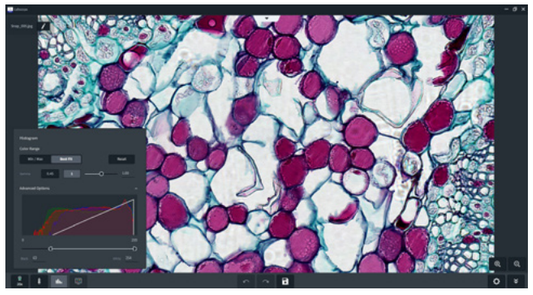
Your imaging software for your daily laboratory work.

Labscope is your choice to get fast results at the push of a button. From image acquisition, handy built-in measurement functions up to easy data sharing – with functions dedicated to your daily workflow, you can increase the efficiency of your biomedical lab. With Labscope you acquire brilliant images and get meaningful and reproducible results with ease.



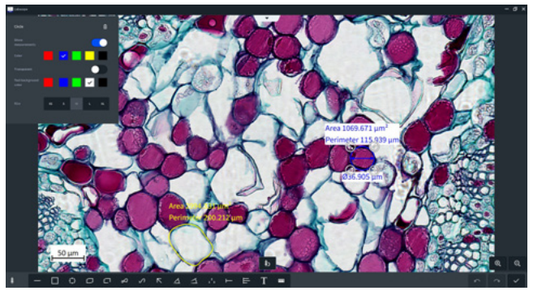
Acquisition settings

Get in-app control of your hardware to adjust exposure, white balance, light intensity and more. Focus on the specimen all the time.



Histogram

The histogram panel is available for both live view and image view. The Min/ Max and Best Fit functions optimize the display effect with just one click.

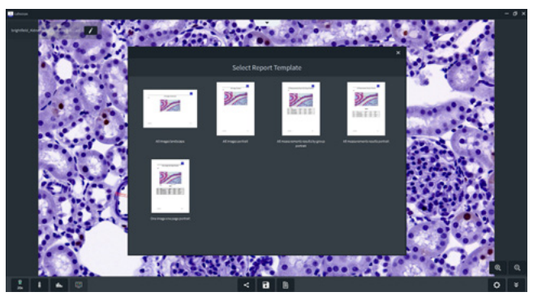


Annotations and measurements

Choose between 15 types of annotations and easy adjustments of color and size.

Split view

Compare your images in detail with the split view. Zoom in and zoom out, and even save the image of split view for documentation.

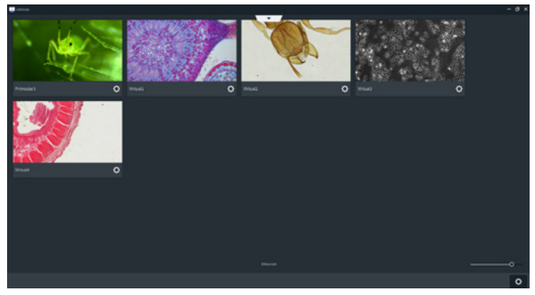


Report

Different kinds of report templates are prepared for you to quickly create reports from your microscopy work.

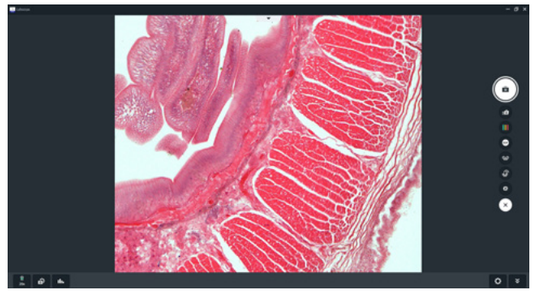
File management

Sort, search and share your images, videos and reports.
Barcode scanning is also available when you want to set a file name or search a file.



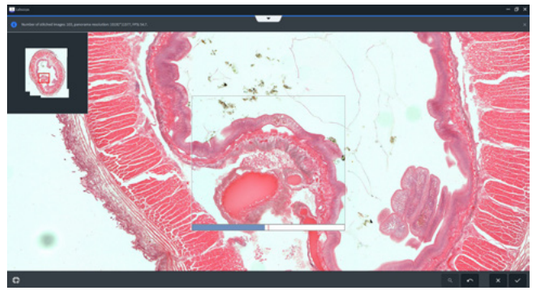
Microscope list

Get an overview of all connected microscopes. Manage and work on them easily.



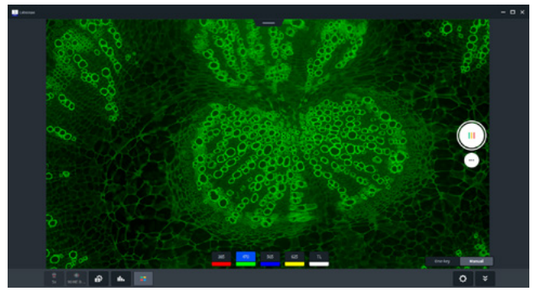
Live view and acquisition modes*

High-quality live image and multiple acquisition modes make your microscopy work more flexible.



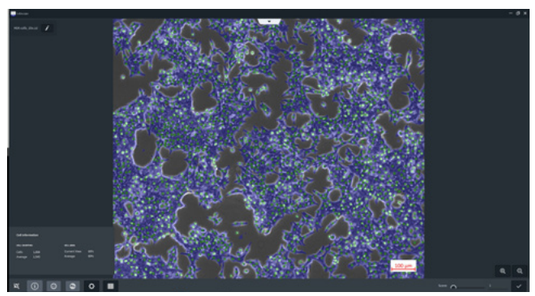
Fast Panorama

Acquire whole slide images with your manual microscope. Profit from a fast stitching speed and high image quality. Only avaliable for Windows Labscope.



Multi-Channel

Acquire fluorescence and transmitted light images in independent channels. The module supports adding false-color, comparing channels and reporting with displaying each channel.



AI Cell confluency and AI Cell counting

Analyze the number of cells and cell growth automatically with the help of artificial intelligence.

* Availability of each acquisition mode is depending on cameras and microscopes.

ZEISS ZEN core

Your microscope software for user-specific repetitive workflows in biomedical labs

You decide what your microscope software looks like. With ZEN core you can adapt the user interface exactly to your application.

- Configure your ZEN core only with necessary functions.
- Define and combine workbenches easily to create workflows, so called jobs.
- Jobs guide your operators through a defined flow of consecutive tasks ensuring data repeatability and ease of use.
- Combine Job Mode with user management functions to assign specific imaging tasks to certain users and user groups.
- Opt for the GxP or Multi Channel toolkit, when traceability or fluorescence imaging of biological samples is important to you

ZEISS Axiocam – Microscope Cameras

Accurate documentation is an important part of your daily analyses.

Brilliant images reveal the state of your samples.
Select the Axiocam microscope camera best suited to your application.

	CMOS	CCD		
Microscope Camera	Axiocam 105 color	Axiocam 202 mono	Axiocam 208 color	Axiocam 305 mono
				
Specification				
Effective pixels	5 megapixels	2 megapixels	8.3 megapixels	5.07 megapixels
Number of pixels	2592 × 1944	1920 × 1080	3840 × 2160	2464 × 2056
Pixel size	2.2 µm	5.86 µm	1.85 µm	3.45 µm
Sensor size	1/2.24"	1/1.2"	1/1.7"	2/3"
Sensor diagonal	7 mm	13.4 mm	9.33 mm	11.1 mm
Maximum frame rate at resolution	17 fps at 5 MP	30 fps at 1080p	30 fps at 4K/1080p	67 fps at 1920 × 1080
PC interface	USB 3.0	USB 3.0 Type C, Ethernet, HDMI	USB 3.0 Type C, Ethernet, HDMI	USB 3.0 SuperSpeed USB 2.0 optional
Stand-alone mode		■	■	
Special features				
Recommended for				
Documentation and convenient image processing	●●●●	●●	●●●●	●●●●

●●●●● Suitable
● Partly suitable

Axiocam 305 color	Axiocam 506 mono	Axiocam 506 color
		
5.07 megapixels	6 megapixels	6 megapixels
2464 × 2056	2752 × 2208	2752 × 2208
3.45 µm	4.54 µm	4.54 µm
2/3"	1"	1"
11.1 mm	16 mm	16 mm
67 fps at 1920 × 1080	19 fps at 2752 × 2208	19 fps at 2752 × 2208
USB 3.0 SuperSpeed USB 2.0 optional	USB 3.0	USB 3.0
●●●●	●●●●	●●●●

●●●●● Suitable
● Partly suitable

Multidiscussion from ZEISS

Share your images with other viewers.

You can use the classic multidiscussion system for training and consultation situations as well as in the medical world, for example when training students or when jointly assessing difficult specimens.
With the multidiscussion unit from ZEISS, depending on the microscope and illumination used, up to 20 people can see the same image in the same orientation as the main viewer. This avoids irritation resulting from rotated or mirrored images. The main viewer and the additional viewers all profit from the homogeneously illuminated field of view.
For specimens stained with different colors, you can smoothly adjust the intensity of the light pointer between white, green, and red. This helps with orientation.

Configured to Your Requirements

Microscopes
Axiolab 5: at least up to ten additional viewers (LED)
Axioscope 5: at least up to ten additional viewers (LED) or up to 20 additional viewers (HAL 100)
Axio Imager.A2: up to 20 additional viewers (HAL 100)

Accessories
Central part, tube holder, tubes, eyepieces

Service and support for your ZEISS microscope system.

ZEISS moments are about passion. It is this passion with which we service and optimize your ZEISS microscope and keep it at the latest state of the art, so that your work can systematically lead to success.

Experience service that lives up to its name.
Your microscope system from ZEISS is one of your most important tools. For over 160 years, the ZEISS brand and our experience have stood for reliable equipment with a long life in the field of microscopy.

You can rely on us to ensure that you can always use your microscope's full performance. With repair services and spare and replacement parts, our skilled ZEISS service team makes sure that your microscope is always ready for use. Our experts keep on working even after you have chosen ZEISS, with a wide range of additional services to ensure that you can experience those special moments – those special moments that inspire your work.

Maintenance and optimization
Your ZEISS Protect service agreement provides all-around security for your microscope system. There are no unexpected operating costs, and the availability of your system is increased. With preventative maintenance as a fundamental part of the service agreements, you benefit from optimized system performance. We'll work with you to select the service package that best meets your needs, that corresponds to the equipment that you have, and that is tailored to the specific requirements of your applications.

Enhance your microscope system
Your ZEISS microscope is designed to be future-proof. Open interfaces allow you to extend your system. You can add your choice of accessories to keep up with the state of the art and thus extend your microscope's useful life.

We would be happy to help you to find which accessories are available for your microscope that ideally match your application.

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zeiss.com/micro/applications

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