

Microscopy from Carl Zeiss

Microscopes

The Economy Class



**Education
Laboratory
Routine**



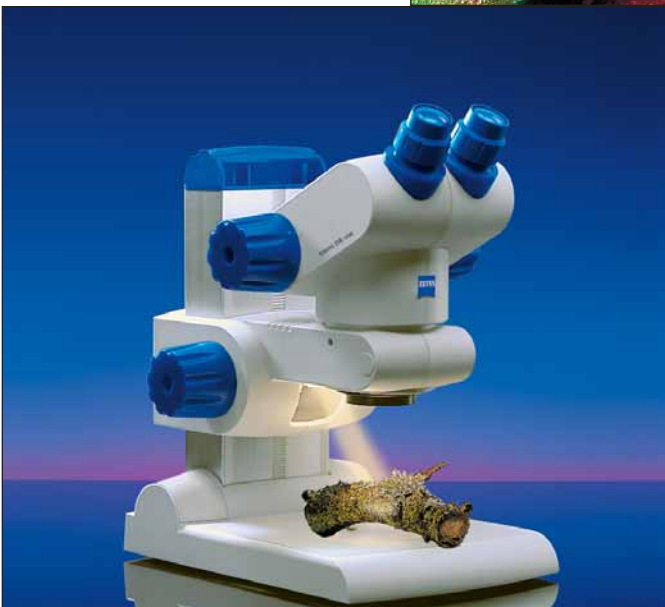
No matter whether you need it for the office, for training, or to make your daily routine work easier, more efficient and more economic – Carl Zeiss offers you a suitable spectrum of light microscopes. For outstanding flexibility from upright and inverted microscopes to stereo-microscopes, an impressive ergonomic design and superb operating convenience, with future-proof equipment and upgrading possibilities, and totally convincing in price and performance.



Stemi DR1040

Reliable compact stereo-microscope with two fixed magnifications

- for preparations in teaching and training
- for the examination of 3D objects in the hobby field



Aphids, brightfield reflected light

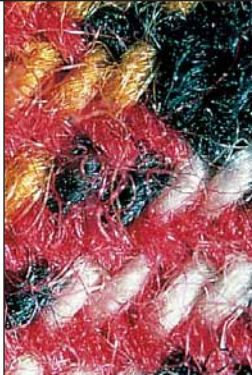
	Basic instrument	Exchangeable optics
Greenough principle	Fixed magnification	
Magnification range	10 x and 40 x	3 x to 80 x*)
Free working distance	92 mm	identical to attachment system
Maximum field of view	20 mm	20 mm
Maximum object field	20 mm	66.7 mm

*) in steps

Stemi DR1663

Reliable, compact stereo-microscope with two fixed magnifications

- for the monitoring of industrial production processes
- for the examination of 3D objects in endomology



Textile fabric, brightfield reflected light

	Basic instrument	Exchangeable optics
Greenough principle	Fixed magnification	
Magnification range	16 x and 63 x	4.8 x to 126 x*)
Free working distance	92 mm	identical to attachment system
Maximum field of view	20 mm	20 mm
Maximum object field	12.5 mm	41.7 mm

*) in step

Stemi DV4

Reliable compact zoom stereomicroscope

- for preparations in teaching and training
- for the examination of 3D objects in biology



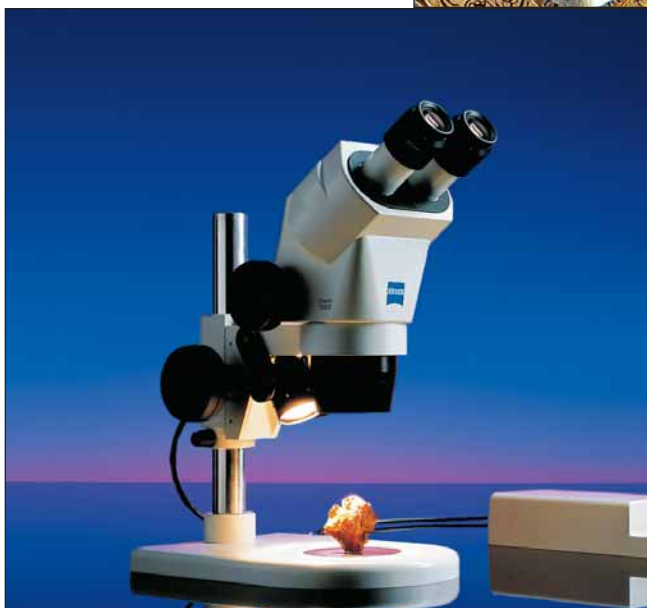
Feather, darkfield transmitted light

	Basic instrument	Exchangeable optics
Greenough principle	Zoom system	
Magnification range	8 x and 32 x	2.4 x to 64 x
Free working distance	92 mm	identical to attachment system
Maximum field of view	20 mm	20 mm
Maximum object field	25 mm	83.3 mm

Stemi 2000

High-performance,
compact stereomicroscope

- for research in natural sciences and for routine applications
- in industrial assembly, testing and measuring technology



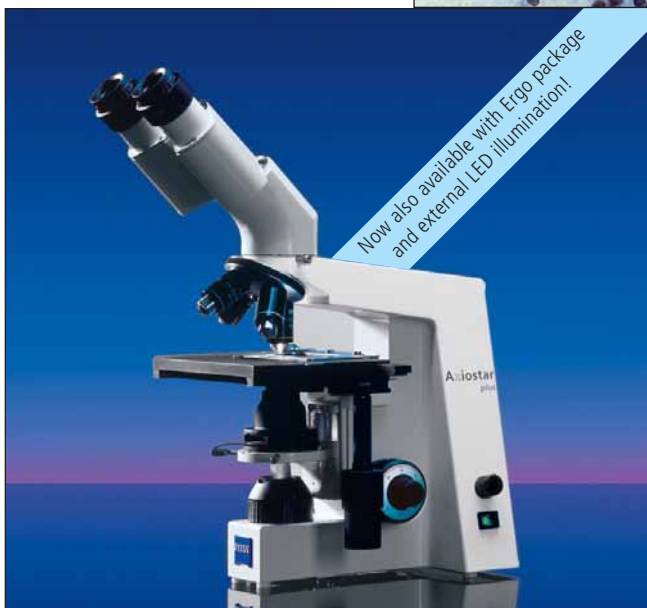
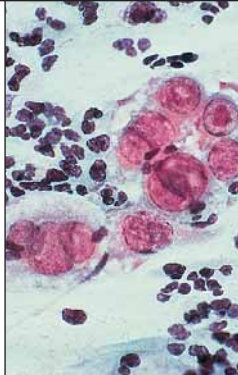
Watch movement, brightfield reflected light

	Basic instrument	Exchangeable optics
Greenough principle	Zoom system	
Magnification range	6.5 x and 50 x	1.95 x to 225 x
Free working distance	90 mm	identical to attachment system
Maximum field of view	23 mm	21/16/10 mm
Maximum object field	35 mm	118 mm

Axiostar plus

Budget-priced, high-performance transmitted-light microscope for

- teaching and training
- routine applications in hospitals, doctor's offices and biomedical laboratories



Gynecological smear, brightfield

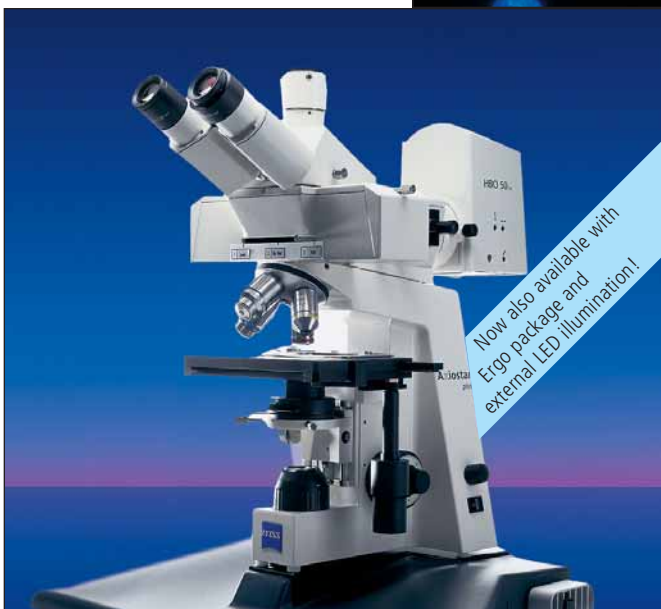
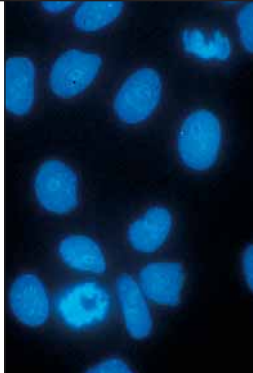
Optics	Optical design	ICS
	Eyepieces	PL 10x/18, PL 10x/20, PL 16x/16
	Max. field of view	SF 20
	Objectives	CP-Achromat, A-Plan, Achroplan, Plan Neofluar
	Condenser	Abbe sliding condenser, Abbe turret condenser, darkfield condensers

Mechanics	Tube	45° tube/phototube, 30° tube/phototube
	Nosepiece	4-position; 5-position
	Stage	mechanical stage 75x30, right; m.stage 75x30, left
	Drive	Ergodrive
	Illumination	20W halogen, integrated, Köhler-type LED with line/battery operation
	Viewing angle/height	variable with Ergo baseplate
	Footprint	variable with/without Ergo baseplate

Axiostar plus FL

Budget-priced, high-performance transmitted-light microscope for

- routine applications in hospitals, doctor's offices and biomedical laboratories
- fluorescence applications in immunohistology and genetics



PtK cells, DAPI, fluorescence

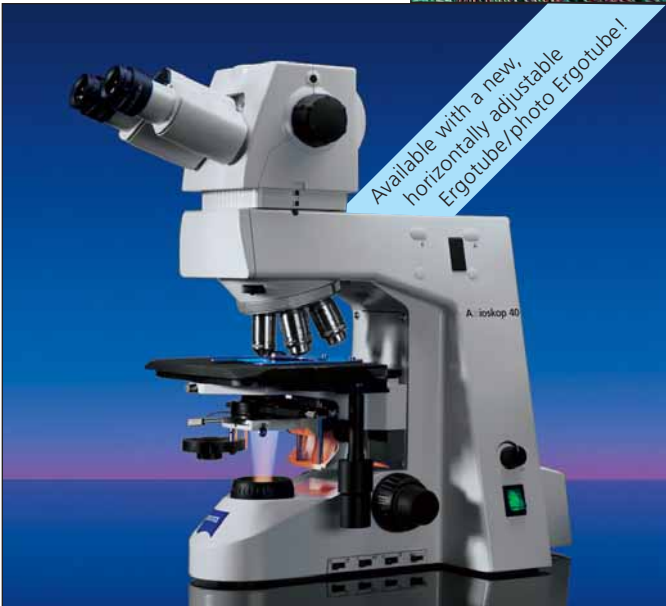
Optics	Optical design	ICS
	Eyepieces	PL 10x/18, PL 10x/20, PL 16x/16
	Max. field of view	SF 20
	Objectives	CP-Achromat, A-Plan, Achroplan, Plan Neofluar
	Condenser	Abbe sliding condenser, Abbe turret condenser, darkfield condensers

Mechanics	Tube	45° tube/phototube, 30° tube/phototube
	Nosepiece	4-position; 5-position
	Stage	mechanical stage 75x30, right; m.stage 75x30, left
	Drive	Ergodrive
	Illumination	20W halogen, integrated, Köhler-type, HBO 50 for FL, LED with line/battery operation
	Viewing angle/height	variable with Ergo baseplate
	Footprint	variable with/without Ergo baseplate

Axioskop 40

High-performance, budget-priced transmitted-light microscope for

- routine applications in hospitals, doctor's offices and biomedical laboratories
- examinations in hematology, gynecology, urology and dermatology



Hyoid bone of a mouse, dark field

Optics	Optical design	ICS
	Eyepieces	PL 10x/23
	Max. field of view	SF 23
	Objectives	A-Plan, Achroplan, Plan Neofluar, Plan Apochromat
	Condenser	Abbe sliding condenser, Abbe turret condenser, achromatic-aplanatic, further condensers

Mechanics	Tube	20° Ergotube/Photo ergotube 0–50 mm Ergotube 6°–25°, 30° tube/phototube
	Nosepiece	6-position
	Stage	wide variety of stages
	Drive	Ergodrive
	Illumination	35W halogen, integrated, Köhler-type; HBO 50 for FL, HBO 103 for FL
	Viewing angle/height	variable, depending on tubes
Footprint	approx. 29 cm x 35 cm (W x D)	

Axiovert 25

Budget-priced, high-performance inverted transmitted-light microscope for

- the observation and analysis of primary and permanent cell cultures
- and for immunologic and clinical routine tests



Rat's myocardium cell, primary culture, VAREL

Optics	Optical design	ICS
	Eyepieces	PL 10x/18, PL 10x/20
	Max. field of view	SF 20
	Objectives	LDA-Plan, Achroplan, Plan Neofluar
	Condensers (NA/AA)	–/190; 0.2/90; 0.4/55; 0.55/31

Mechanics	Tube	binocular tube
	Nosepiece	5-position
	Stage	210 x 290 mm
	Drive	manual
	Illumination	6V 30 Watt halogen lamp
	Viewing angle/height	380 mm or 410 mm
	Footprint	approx. 545 cm ²

		Stemi DR 1040	Stemi DR 1663	Stemi DV4/DV4 SPOT	Stemi 2000/(-C/CS)
Attachment lens systems		●	●	●	●
Objectives					
Eyepieces					●
Stemi mounting brackets (for 76 mm dia.)		●	●	●	●
Stemi mounting brackets					
Stands		●	●	●	●
Stand C		●	●	●	●
Stages		●	●	●	●
Brightfield	Reflected light	●	●	●	●
	Coaxial reflected light			(●)	
	Transmitted light	●	●	●	●
	Mixed light	●	●	●	●
Darkfield	Reflected light	●	●	●	●
	Transmitted light	●	●	●	●
	Mixed light	●	●	●	●
Polarization	Reflected light	●	●	●	●
	Transmitted light	●	●	●	●
Documentation	35 mm photography	●	●	●	(●)
	Large-frame				(●)
	Video / Digital	●	●	●	(●)
Co-observation					
Measurement / Counting		●	●	●	●
Drawing					

		Axiostar plus	Axiostar plus FL	Axioskop 40	Axiovert 25
CP-Achromat		●	●	●	●
A-Plan		●	●	●	●
Achroplan		●	●	●	●
Plan-Neofluar		●	●	●	●
Plan-Apochromat		●	●	●	●
Brightfield	Reflected light				
	Transmitted light	●	●	●	●
Darkfield	Reflected light				
	Transmitted light	●	●	●	
Phase contrast		●	●	●	●
VAREL				●	●
Fluorescence			●	●	●
Polarization contrast	Reflected light				
	Transmitted light	●	●	●	
Documentation	35 mm	●	●	●	●
	Video	●	●	●	●
Co-Observation				●	
Drawing		●	●		

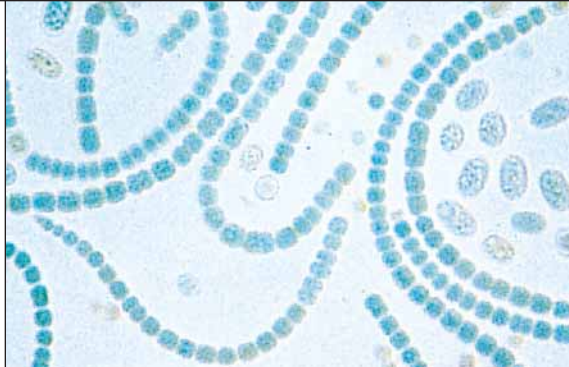
A wide variety of accessories and a sophisticated system of mounting interfaces provide great flexibility to assemble efficient configurations tailored to your requirements.

Contrast methods in microscopy

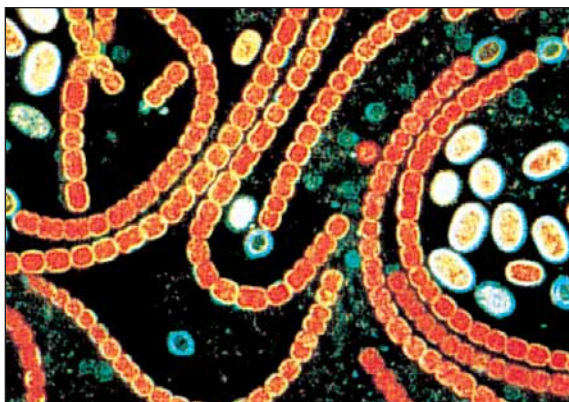
Many specimens (e.g. bacteria or living cell cultures) hardly absorb any light and therefore can hardly be seen in a bright field, if at all.

Therefore, microscopists use various contrasting methods. These are tricks which translate invisible optical effects in the specimen into intensity differences that can be detected by the human eye.

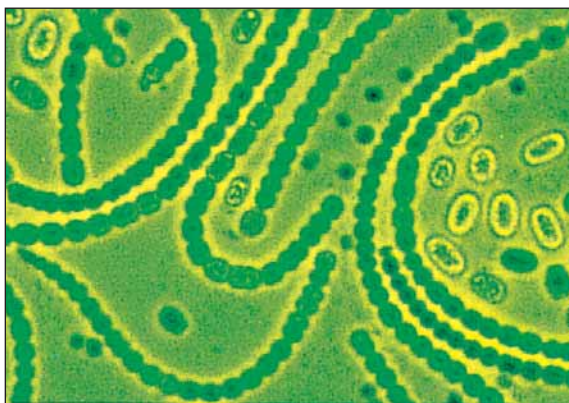
Specimen:
Anabaena variabilis



Bright field



Darkfield



Phase contrast



Fluorescence

How to set Koehler illumination correctly

Select a medium-power objective.
Move condenser to upper end position and set it for bright field.

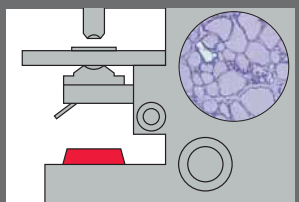
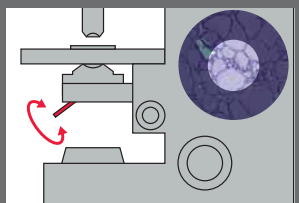
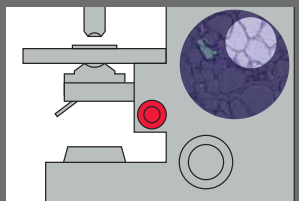
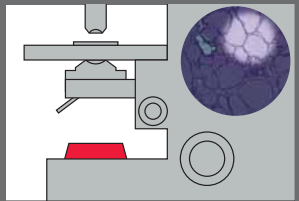
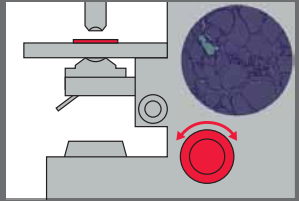
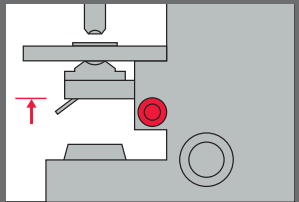
Focus on specimen.

Narrow down field diaphragm to see its contour in the eyepiece.

Focus on field diaphragm contour by lowering and raising the condenser.

Center the condenser in its mount to make field diaphragm contour concentric with visual field.

Open field diaphragm until it coincides with outer margin of visual field.



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**Carl Zeiss
Light Microscopy**

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Subject to change

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