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DO Genetic Pro with built-in camera is a versatile biological microscope with magnification as standard from 40 to 1000x, with the option of optional extension up to 1600x. It has a reliable, achromatic optics and is characterized by a solid mechanical construction. Built-in USB camera allows you to take photos and record video sequences observed through a microscope of preparations with a resolution of ? 1.3 MPix. An additional advantage of this model is the built-in battery in the base of the microscope allowing for field operation, in the absence of access to mains power. The Genetic Pro microscope series also offers extensive expansion options with optional accessories that allow the use of various observation techniques, such as dark field observation or phase contrast. Technical parameters of the microscope

- length of the tube: 160 mm
- Siedentopf type head, binocular head, with built-in camera, 360 ° rotation, 30 ° inclination
- glasses: WF10x / 18 mm (2 pieces)
- eyeglass adjustment range: 48 - 75 mm
- four-seat lens pan, retracted
- lenses: achromatic DIN 4x, 10x, 40x (cushioned), 100x (immersive, shock absorbed)
- sharpness adjustment: coarse movement (macrometric screw) and fine movement (micrometer, coaxial screw)
- Sensitivity and elementary plot micro screw: 0.004 mm, range 24 mm
- condenser: Abego bright field, NA 1.2, with iris diaphragm and filter socket
- table: fixing of 1 or 2 preparations, table dimensions: 142 mm x 132 mm, XY movement range: 75 mm x 40 mm
- lighting: LED 3W with adjustable intensity
- operating temperature range: 0 - 40 ° C
- built-in battery for field work: YES
- power supply: 230 V AC (mains)
- maximum height of the microscope: 38 cm
- weight: about 5 kg

Technical parameters of the built-in USB camera

- matrix: CMOS, 1/2 "
- physical resolution: 1280 x 1024 (1.3 Mpix)
- color: 24 bits
- sensitivity: 1.8 V @ 550?m / lux / s
- exposure: manual / automatic
- SNR (signal to noise ratio) :> 45 dB
- dynamic range: 62 dB
- connector: USB 2.0 Plug & Play

Information about the included software

- language version: Polish
- saving video sequences: yes
- saving images / photos: yes
- measurements of: distances, angles, polygon fields, radius of a circle
- calibration: possible after equipping the microscope with a 1/100 mm calibration slide
- system requirements: Win XP / Vista / 7 32 bit / 64 bit

Equipment

- glasses WF 10x / 18mm, ? fixtures = 23 mm (2 pieces)
- achromatic 4x, 10, 40x, 100x (DIN) lenses
- green contrast filter
- immersion oil
- cover for microscope (anti-dust)
- software disc

Options for expanding the set (list of recommended optional accessories)

- 16x 23 mm glasses (magnification up to 1600x)
- 60x lens
- oil condenser to a dark field
- condenser dry to a dark field
- a set for straight polarization
- phase contrast kit
- polarity analysis table
- heating table
- Goose neck halogen lighting
- Helicon Focus photo processing software
- calibration glass 1/100 mm
- coverslips and coverslides
- ready-made preparations
- immersion oil
- adapter for connecting a reflex camera (23 mm / T2)

Warranty 2 years (note: in the above pictures version without built-in battery, version with battery has a diode indicating the battery status next to the manufacturer's logo)

Sample photos by Delta Optical Genetic Pro Bino microscope with built-in 1.3 Mpix camera. Similar results can be achieved with other microscope cameras with any DO Genetic PRO series microscope. Full size photo is available by clicking on the selected photo below.

A bright field Polarization (with a simple polarity kit for DO Genetic Pro, available separately; citric acid crystals) Liquid crystals The following pictures were taken using the Nikon CoolPix L22 camera in an afocal projection. Phase contrast (with the optional phase contrast kit available separately) Shell onion oil Epithelial human cells (from the cheek) Blood (human, alive)

A dark field The following pictures were taken using the Nikon CoolPix L22 camera in the afocal projection (camera mounted with a universal shelf). DO Genetic Pro microscope + dry dark condenser. Swirls, slippers and permanent preparations.

Additional notes - didactic method Didactic measure recommended for school use by the minister competent for education and upbringing and included in the list of didactic resources intended for general education, for teaching biology at the level of junior high school, general secondary school - basic and extended education, specialized secondary school and technical high school, based on reviews of experts: - prof. dr hab. Danuta Cichy, recommended by the Educational Research Institute, - dr. Wiktor Dżygóra, recommended by the Academy of Physical Education in Katowice. Recommendation number: 2433/2009