ZEISS Microscope Systems for Forensic Investigations

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Seeing beyond

ZEISS Microscope Systems for Forensic Investigations

Toolmarks

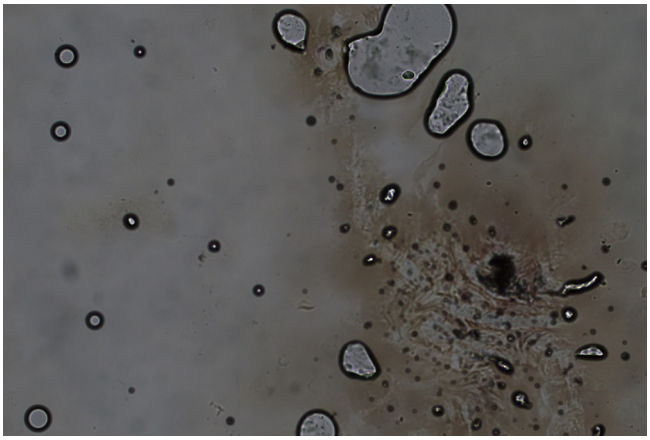
LEEDS Discovery Z

- Motorized zoom comparison microscope based on ZEISS optics
- Plan apochromatically corrected optics (deviation of magnification of beam path < 1%)
- Standard magnification with 1.0× Plan Apo objective 7.5× to 150× (further objectives on request)
- Motorized comparison bridge
- Motorization of x, y, z axis synchronously or separately. Control of the microscope Z-axis via ZEN Core software
- Acquisition with extended depth of field (EDF) and panorama images possible (stiching)
- Control of the optics via SyCoP3 (motorized zoom and magnification correction of a beam path)
- Illumination: coaxial, line lights, ring lights, gooseneck

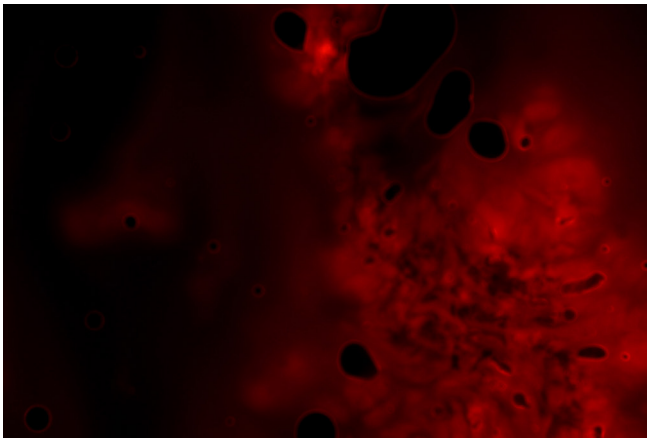
- Various sample holders
- Optional multidiscussion equipment

Porphyrin Analysis

- Fluorescence microscope based on ZEISS Axioscope 5 to detect traces of blood (positive or negative). During the porphyrin analysis traces appearing as blood will we treated with concentrated sulfuric acid. Even the smallest traces of the blood pigment hemoglobin show up in the fluorescence microscope as an intense red light emission.
- Contrasting techniques: transmitted light brightfield, reflected light fluorescence with light source HXP 120
- Special filter set Porphyrin with adapted excitation and emission spectrum
- Objective A-Plan 10× and 40×
- Optional: microscope camera



Porphyrin sample from a dried bloodstain. Acquired in transmitted light brightfield, objective: A-Plan 10×, microscope camera ZEISS Axiocam 305 color



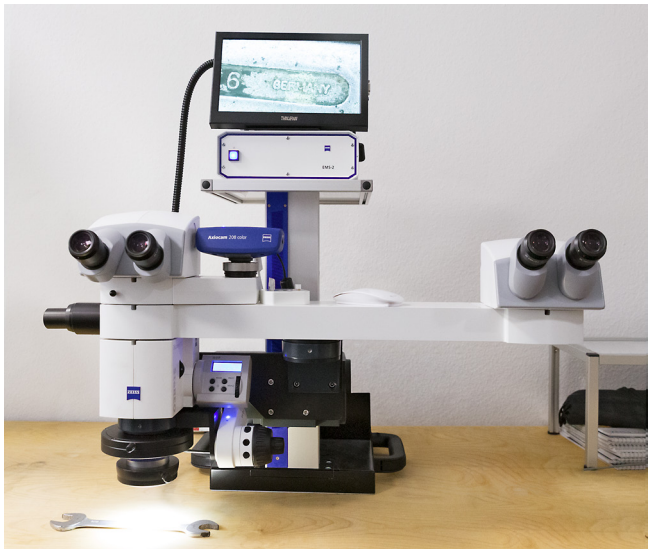
Porphyrin sample from a dried bloodstain. Acquired in reflected light fluorescence, objective: A-Plan 10×, Porphyrin filter set, microscope camera ZEISS Axiocam 305 color

Leeds Trace Z

- Comparison microscope based on ZEISS Axioscope 5/7 for reflected and transmitted light illumination
- Motorized comparison bridge, split view, superimposed, sliding
- Optional motorized stage
- Contrasting techniques:
  a) Transmitted light: brightfield, darkfield, polarization, phase contrast, DIC, fluoresence
  b) Reflected light: brightfield, darkfield, DIC, fluorescence, C-DIC

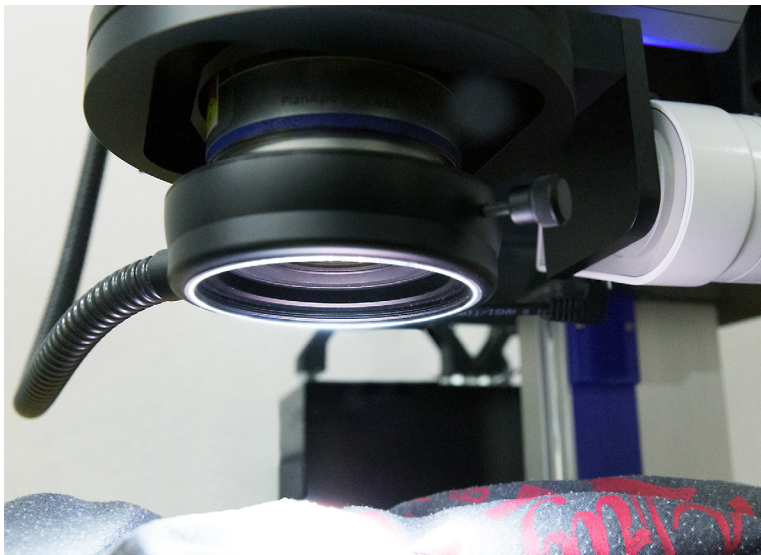
Teaching Microscopes

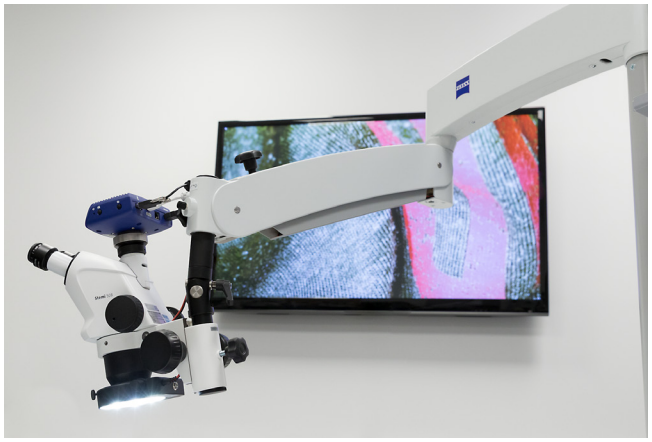
- Based on ZEISS SteREO Discovery.V12
- Standard magnification with 1.0× Plan Apo objective 8× – 100× (other objectives optionally available)
- Multidiscussion equipment for teaching
- Flexible illumination, e.g. fibre optics, LED ringlights, spot illumination
- Free-arm stand for examinations directly on the lab bench
- Control via MARc, directly on the microscope carrier (optional: SyCoP3)
- Storage space on the microscope column (no disruptive control devices on the table)
- Camera connection with direct display option via monitor
- Optional: Integration of the microscope and the camera in ZEN core to acquire images with an extended depth of field



Applications

- Fibre trace analysis
- DNA dander
- Tool marks
- Documents





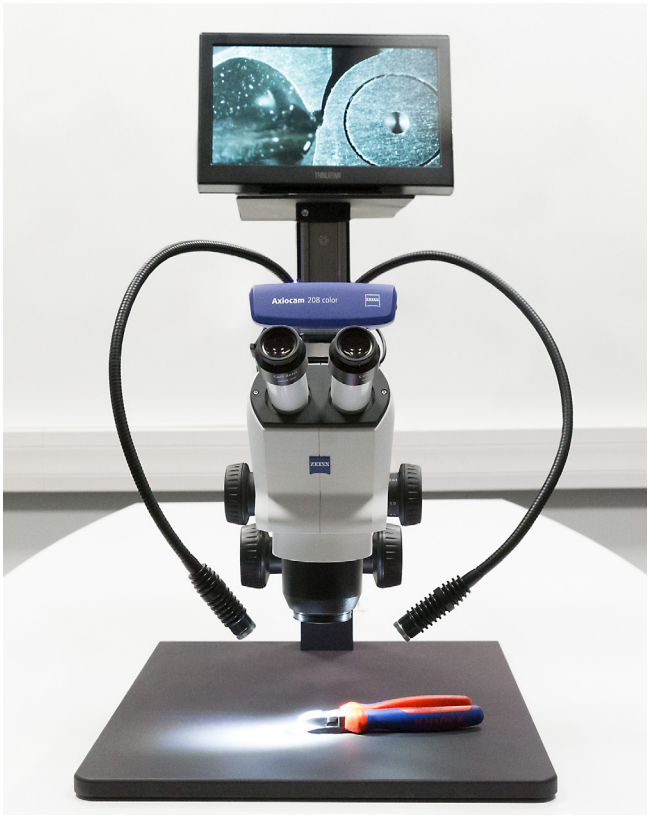
Trace Evidence

Floor stand

- mobile and stable floor stand with moveable, lockable castors and freely rotable boom
- in combination with apochromatic corrected stereo microscope ZEISS Stemi 508 for trace analysis

Customized stands on request:

- For examination of large or high samples
- Free-boom stand with spacer to work directly on the table
- Universal stands with large base plates and larger distance between column and optical axis, for reflected and transmitted light
- Further bridge and wall stands on request



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Carl Zeiss Microscopy GmbH
07745 Jena, Germany
microscopy@zeiss.com
www.zeiss.com/forensics