How to use correctly the microscope Leica DM4500P

(room 2C579)
Overview of the Instrument

Overview of the software Leica Application Suite V3.2.0

Frequently asked questions and problems
Overview of the instrument

1 Camera
2 Eyepiece
3 Tube
4 Objective turret with objectives
5 Specimen stage with specimen holder
6 Condenser
7 LCD
8 Operating buttons
9 Variable function keys
10 Analyzer
11 Handwheel for focusing
12 Control bar for camera
13 Lamp housing for incident light
14 Lamp housing for transmitted light
15 Control bar for the conoscope

Leica DM4500P
Eyepieces – Correction for vision problems

Before you start check if the settings of the eyepieces fit for you!
Eyepieces – Correction for vision problems

- With your right eye, look through the right eyepiece and bring the specimen into sharp focus.
- Then, with your left eye, view the same position of the specimen and rotate the left eyepiece tube until this position is brought into sharp focus. **Do not use the focus wheel.**
Overview of the instrument

Control panel

1 Light intensity
2 Field diaphragm
3 Aperture diaphragm
4 Transmitted light/ incident light
• Adjust the brightness using the function keys (1).
• The **INT** function buttons are always assigned to the currently active transmitted light (TL) or incident light (IL) axis.
• The intensity is individually adjusted and stored for each objective and contrast method.
Diaphragms

- The diaphragms have been set to suitable values for the current objective and contrast method at the factory.
- The diaphragms can be adjusted at any time using **AP** (aperture diaphragm 3) and **FD** (field diaphragm 2) function keys.

The old values will be overwritten by the current ones!
Overview software Leica Application Suite V3.2.0
Overview of Leica Application Suite V3.2.0

How to make a picture

Acquire mode
objectives
Light (TL/IL)
Diaphragms and Intensity of the light

Acquire image
Camera settings

- Automatic exposure
- Automatic white balance on whole image
- Show camera settings window
Overview of Leica Application Suite V3.2.0

How to make a picture

Choose an image name
Overview of Leica Application Suite V3.2.0

How to describe a picture

Browse mode
Overview of Leica Application Suite V3.2.0

How to merge the scale bar on a picture

Process mode

Scale bar and description options
How to merge the scale bar on a picture

Before merge: Click once on a nearby picture and than again on your current picture!
Overview of Leica Application Suite V3.2.0

How to do analysis on a picture

**Distance tool:** measuring of a straight line
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How to do analysis on a picture

**Line tool**: measuring of a line
Overview of of Leica Application Suite V3.2.0

How to do analysis on a picture

**Area tool:** measuring of the surface area
How to do analysis on a picture

Ellipse/ circle tool: measuring the surface area of a ellipse/circle
How to do analysis on a picture

**Angle tools:** measuring the angle of interest
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How to do analysis on a picture

**Count tool**: counting mineral grains or clasts...
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How to do analysis on a picture

Cross tool: measuring the length x- and y-axis
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How to export results of analysis

Results can be selected and exported to Microsoft excel directly.
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How to merge analysis on a picture
Select your pictures, right mouse-click **EXPORT**
Frequently asked questions and problems

• Microscope and software are on, but there is no live-picture on the monitor (Acquire mode).

• Check the control bar of the camera (=INPUT). Three positions are possible: IN – MIDDLE – OUT.
• Check the camera connection (cable)
The pictures are exported, but the scale bar is missing while the merge button was used and a duplicate was created. Both pictures are without a scale bar.

**Before merge:**
Click once on a nearby picture and than again on your current picture!

**Before export:**
Check your pictures if the MERGE button is active.
Frequently asked questions and problems

• The scale bar does not fit with the objectives.

Exit the software Leica Application Suite V3.2.0. Be sure that the microscope is on. Start software again.

Always startup the microscope before starting the software!
Thank you!