Operating instructions

Omegon® Binofield Microscope

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Omegon® Binofield Microscope

Thank you for choosing this high-quality microscope from 'Omegon'. This microscope system is used to examine thin wafers and fluid samples using the bright field contrast method. Thanks to the integrated incident light function, it is also suitable for thin, non-translucent specimens, e.g. stamps.

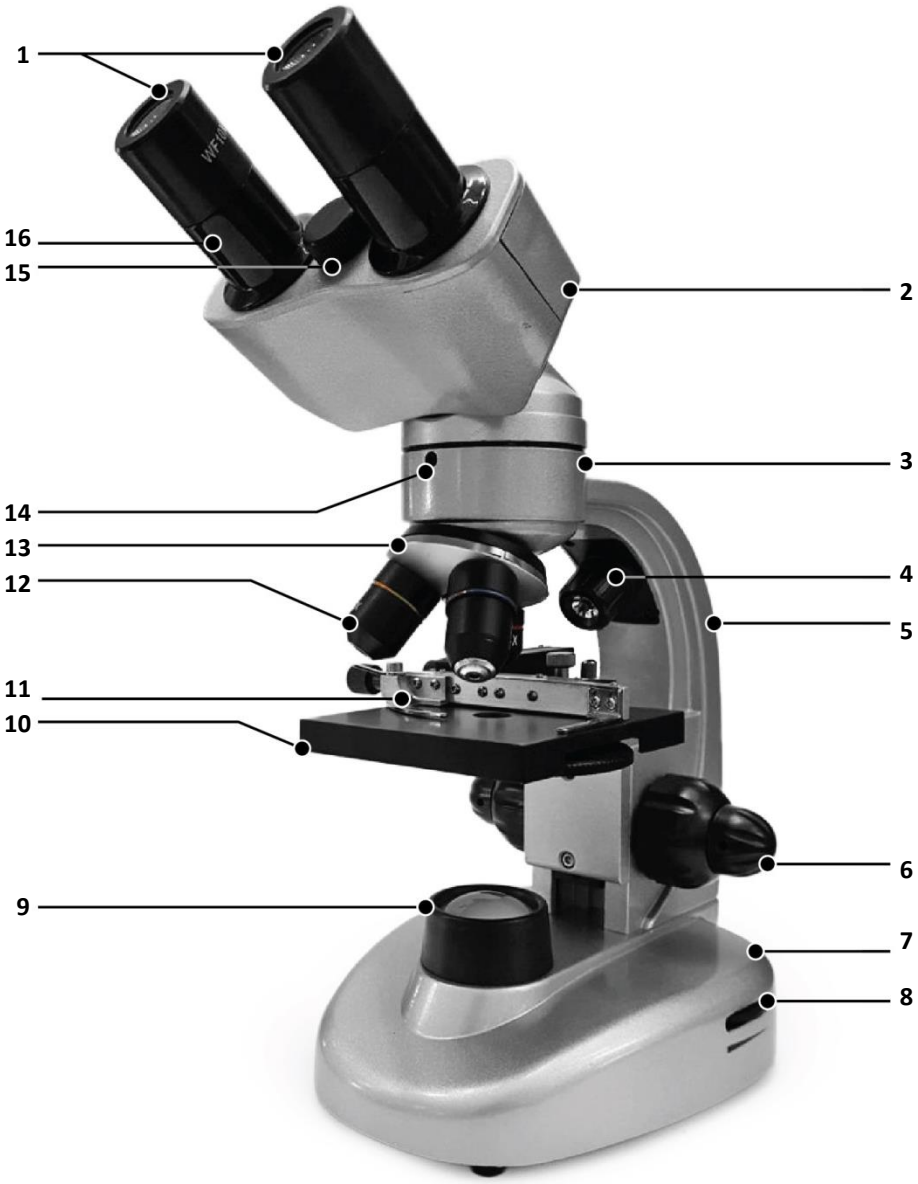
1. Preparation.

Before using for the first time, read these operating instructions carefully so that you can make full use of all the options this microscope has to offer. The safety-related instructions on how to handle this device are also described here and must be followed.

1.1. Delivery scope.

Rechargeable AA batteries can be inserted under the base. This means that this microscope can also be used outdoors without a power connection, i.e. a mains adapter.

1. Eyepiece pair WF 10x
2. Binocular head
3. Binocular head support
4. Incident light
5. Tripod
6. General and fine focusing
7. Foot/base
8. Brightness control dimming wheel
9. Transmitted lighting
10. Specimen stage
11. Mechanical stage with fine focus wheels
12. Lenses
13. Revolving nosepiece
14. Clamp screw bino-head
15. Adjustment lever pupil distance
16. Eyepiece tubes



A. Slide
B. Dust cover
C. Cultivation tank
D. Hand microtome
E. Scissors
F. Pipette
G. Specimen needle
H. Tweezers
I. WF 10x eyepiece
J. Containers (salt, yeast, gum media & crustacean eggs)

1.2. Technical data.

Biological, binocular transmitted and incident light microscope.
Dimmable lights: LED
Pupil distance can be set: 58 - 71 mm
Achromatic lenses: 4x, 10x, 40x
Specimen protection: For 40x lens
Work distances of the lenses: 4x = 37.50 mm, NA = 0.10
10x = 7.63 mm, NA = 0.25
40x = 0.63 mm, NA = 0.65
Eyepieces: 2 x WF 10x
Magnifications: 40x, 100x, 400x
Coaxial mechanical stage: Fine focus adjustment knob in x / y axis
General and fine focusing
Filter wheel
Separate mains adapter
Battery mode: Yes, with separate AA batteries, (rechargeable)
CE-certified.

1.3. Design.

1.3.1. Before commissioning, take the microscope out of the transport bag and place it on a stable work surface.
1.3.2. Remove the plastic packaging material, the dust cover and the protective paper on the specimen stage.
1.3.3. Familiarise yourself with your new microscope. Move all mechanical parts, such as the focus, the revolving nosepiece, the filter wheel, the mechanical stage etc. carefully by hand and see how they work and what effect they have.
1.3.4. Then connect the device to the power supply correctly.

Caution:
Set the pupil distance so that the view through the eyepiece provides a round image.

2. Use.

2.1. Switch the device on and set the brightness on the dimming wheel to a pleasant level.

2.2. Carefully clamp the slide with a finished specimen that you want to examine onto the specimen stage using the clamps of the mechanical stage.

2.3. Now adjust the specimen so that it is illuminated from below; first select the 4x lens and bring the image into focus in the eyepiece using the focus setting knobs.

2.4. You can now examine the specimen step by step in the x and y-axes using the fine focus knobs and magnify it with the 10x and the 40x lens to a magnification of up to 400x. It may be necessary to readjust the image clarity.

2.5. The filter wheel mounted below the specimen stage serves to change and/or enhance the contrast. Simply try out which filter shows more details.

2.6. If you want to change the magnification, turn the revolving nosepiece and thereby change the lenses 4x - 40x. Ensure that the lenses do not collide with the specimen during swivelling. It is advisable to move the specimen stage down slightly to leave enough space between the lens and the specimen. Then re-focus. The correct lens change is accompanied by a clear clicking sound.

2.7. Now change the general setting slowly until you can see an almost sharp image, and then use the fine setting of the focus to achieve perfect image clarity. If you now select a higher magnification, i.e. a different lens, you only need to turn the fine setting to reach image clarity again.

Tip:
For more details and a better contrast, turn the matching colour screen on the filter wheel between the specimen stage and transmitted light.