Troubleshooting MBL4000 series

FAULT	POSSIBLE CAUSE	REMEDY
No microscope image visible	Objective not correctly engaged in the revolving nosepiece	➔ Turn the revolving nosepiece until it clicks into place
	Condenser not correctly inserted into the condenser mount	➔ Push the condenser into the condenser mount as far as possible
	Illumination not switched on or defective	➔ Turn on the illumination ➔ Contact customer service
	Microscopy is started with very high magnification and specimen is not found	➔ Always start microscopy with the smallest magnification
	A cover glass that is too thick was used, which means that the image cannot be focused without collision	➔ Use cover glasses with a thickness of 0.17 mm
Microscopy image is blurred	Objective has collided with specimen	➔ Prevent objective from colliding with specimen
	The 100X objective is used in air	➔ Always operate 100X objective with immersion oil
	A cover glass that is too thick was used, which means that the image cannot be focused without collision	➔ Use cover glasses with a thickness of 0.17 mm
	No cover glass was used	➔ Use cover glasses with a thickness of 0.17 mm
	The specimen between the slide and the cover glass is thicker than necessary	➔ Microscopy with only as much specimen as necessary
	Dioptre compensation is not set correctly, or dioptre compensation is incorrectly used for focussing the microscope image	➔ Do not use dioptre compensation to focus the microscope image ➔ Perform dioptre compensation
There is dirt visible in the microscope image	There is dirt on the slide or cover glass	➔ Use only clean slides and cover glasses and avoid fingerprints.
	Dirt is on or in the eyepiece	➔ Carefully clean the eyepiece lens from both sides. To do this, use compressed air or a fine, lint-free cloth and water/Isopropanol.
	There is dirt on or in the objective, e.g. immersion oil	➔ Carefully clean the lens of the objective. To do this, use compressed air or a fine, lint-free cloth and water/Isopropanol. ➔ If there is dirt inside the objective, carefully(!) unscrew it and clean the lenses with extreme caution.
	Dirt is in the remaining optics in the microscope head	➔ Remove the microscope head, remove the eyepieces and blow through the microscope head with compressed air

FAULT	POSSIBLE CAUSE	REMEDY
Contrast too weak	• Aperture diaphragm not set correctly	➔ Set aperture diaphragm
	• The specimen between the slide and the cover glass is thicker than necessary	➔ Microscopy with only as much specimen as necessary
	• The wrong aperture was set in the phase contrast device	➔ Select the correct aperture of the phase contrast device for the objective
	• Light intensity too low/too high	➔ Adjust light intensity
	• Filter plate is located on the glass panel of the illumination	➔ Remove filter plate
Contrast too strong/edges of objects show distortions	• Aperture diaphragm not set correctly	➔ Set aperture diaphragm a
Microscope image is too bright	• Light intensity too high	➔ Adjust light intensity
	• Aperture diaphragm or field diaphragm were used to control brightness	➔ Set aperture diaphragm and luminous field diaphragm ➔ Adjust brightness control only via lamp control
	• The wrong aperture was set in the phase contrast device	➔ Select the correct aperture of the phase contrast device for the objective
	• Wrong mains adaptor used	➔ Use the mains adapter supplied
Microscope image is too dark	• Light intensity too low	➔ Adjust light intensity
	• Filter plate is located on the glass panel of the illumination	➔ Remove filter plate
	• The specimen between the slide and the cover glass is thicker than necessary	➔ Microscopy with only as much specimen as necessary
	• Dirt on the glass pane of the illumination	➔ Clean the glass pane carefully. To do this, use compressed air or a fine, lint-free cloth and water/Isopropanol.
	• Dirt on or in the condenser	➔ Carefully clean the lens of the condenser from both sides. To do this, use compressed air or a fine, lint-free cloth and water/Isopropanol.
	• Condenser not inserted correctly into the condenser holder	➔ Push the condenser into the condenser mount as far as possible
	• Objective not correctly engaged in the revolving nosepiece	➔ Turn the revolving nosepiece until it engages correctly

FAULT	POSSIBLE CAUSE	REMEDY
Microscope image is too dark	• Aperture diaphragm or field diaphragm were used to control brightness	➔ Set aperture diaphragm and luminous field diaphragm ➔ Adjust brightness control only via lamp control
	• The wrong aperture was set in the phase contrast device	➔ Select the correct aperture of the phase contrast device for the objective
	• Wrong mains adaptor used	➔ Use the mains adapter supplied
	• Illumination not switched on or defective	➔ Turn on the illumination ➔ Contact customer service
Objects are not visible	• Objects are too small to be resolved	➔ No error; observe solution
	• The specimen between the slide and the cover glass is thicker than necessary	➔ Microscopy with only as much specimen as necessary
Image is orange / green / blue / red	• Filter on fluorescence unit wrong	➔ Select the correct filter for the fluorescence unit or do not select a filter for bright field measurement
Fluorescence unit not working/ Fluorescence microscopy not working	• Power supply of the fluorescence unit not switched on	➔ Power supply of the fluorescence unit switched on
	• Connection between power supply of fluorescence unit and fluorescence unit is not connected	➔ Connect the connecting cable between the power supply of the fluorescence unit and the fluorescence unit
	• Slider for adjusting the fluorescent LED is neither fully pushed in nor fully pulled out	➔ Either push the slider all the way in or pull it all the way out
	• Filter on fluorescence unit wrong	➔ Select the correct filter of the fluorescence unit
	• Slider for beam splitter of the fluorescence unit inserted	➔ Pull out the slider for the beam splitter of the fluorescence unit completely
Incorrect fluorescence wavelength	• Fluorescence LED adjustment slider not set correctly	➔ Select the correct fluorescent LED using the slider
	• Filter on fluorescence unit wrong	➔ Select the correct filter of the fluorescence unit
Image too dark in fluorescence microscopy	• Aperture diaphragm of the fluorescence unit closed too far	➔ Set aperture diaphragm
	• Light intensity of the fluorescent LED too low	➔ Adjust light intensity
	• Wrong mains adaptor used	➔ Use the mains adapter supplied
	• The specimen between the slide and the cover glass is thicker than necessary	➔ Microscopy with only as much specimen as necessary
	• Objective not correctly engaged in the revolving nosepiece	➔ Turn the revolving nosepiece until it engages correctly

FAULT	POSSIBLE CAUSE	REMEDY
Image too dark in fluorescence microscopy	• Slider for adjusting the fluorescent LED is neither fully pushed in nor fully pulled out	➔ Either push the slider all the way in or pull it all the way out
	• Fluorescence LED switched off or defective	➔ Turn on fluorescent LED ➔ Contact customer service
Image too bright in fluorescence microscopy	• Aperture diaphragm of the fluorescence unit too wide open	➔ Close the aperture diaphragm further
	• Light intensity of the fluorescent LED too high	➔ Adjust light intensity
	• Wrong mains adaptor used	➔ Use the mains adapter supplied
Microscopy image not visible in camera	• Slider for switching between binocular and trinocular not set to trinocular	➔ Pull out the slider completely to switch between binocular and trinocular
	• Camera not switched on/connected	➔ Turn on/connect the camera
	• All causes, as in **No microscope image visible**	➔ Take remedial action accordingly *No microscope image visible*

➢ **Important note:** Please observe the safety information provided; improper troubleshooting will always invalidate the warranty.

ⓘ If the specified remedial measures do not fix the fault, please contact A.KRÜSS Optronic GmbH customer service. You can reach us via the Contact form on the website.