

UltraMicroscope Specialist Training

Changing Dipping Caps

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All three Miltenyi Biotec objectives allow the usage of any imaging solution. By changing the refractive index (RI)-corrective collar optics (dipping cap) the objective lens itself can be adjusted to different refractive indices.

Tools:



1. Cross screwdriver (PH00x40)
2. Allen key 1.5 mm
3. Allen key 1.3 mm

12x objective:

Dismounting of dipping cap:

1. Loosen the three undermost headless screws using the 1.3 mm allen key.



2. Remove the headless screw on top of the locking screw with 1.5 mm allen key.



3. The immersion correction ring is now free to move and has to be rotated until the previously hidden locking screw is visible. This Phillips screw has to be unscrewed.



4. The dipping cap and the immersion correction ring can now be unscrewed from the objective lens.



Installation of a dipping cap:

1. If both, the threaded pin for covering the locking screw and the Phillips screw are removed from the dipping cap, the dipping cap has to be screwed onto the objectives lens until the mechanical stop. Make sure to hit the thread by turning it in the opposite direction first.
2. Fasten the locking screw into the thread underneath the correction collar.



3. Screw the headless screw to cover the locking screw with allen key 1.5 mm.
4. Rotate the correction collar to calibration position (CAL) while the dipping cap is screwed to the mechanical stop.



5. In this position, the three headless screws are tightened to fix the immersion correction ring on the immersion cap.



6. If the immersion correction ring is set to the required refractive index, the lens can be used.

1.1x and 4x objective:

Changing the dipping cap:

For changing the dipping cap of the 1.1x or 4x objective, just the front part has to be unscrewed without unscrewing any screws. The dipping caps have no differences except for front glasses.



1.1x objective



4x objective

The 1.1x lens has three grub screws in the upper part of the immersion cap. Compared to the 12x objective you expect a safety or adjustment possibility here. However, they only serve the purpose of firmly clamping the immersion cap to the objective so that the immersion correction setting is blocked. There is no safety in the dip cap if it is not clamped with the grub screw. It can be easily unscrewed from the lens. This is done (in the direction of twisting) half a turn after the last scale line of a set up lens/dipping cap combination.