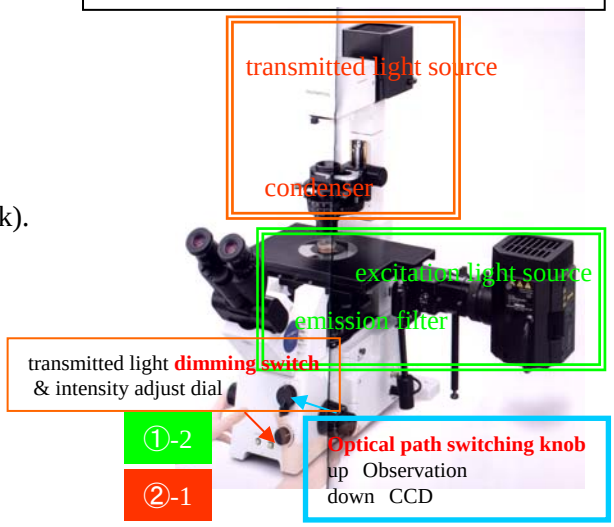
Olympus IX71

Orange…Items related to bright field
Green…Items related to fluorescence
Blue…Items related to both

Operation of microscope

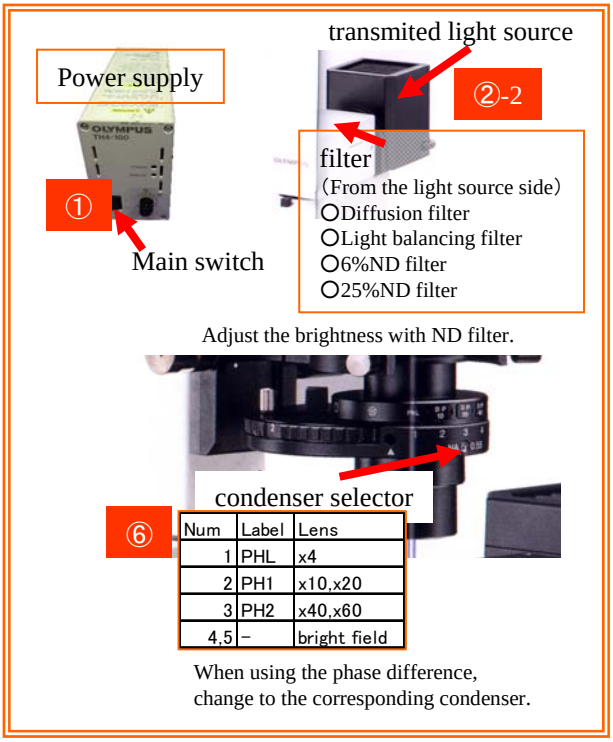
(Move optical path switching to up)

Usually , zoom lens use 1x.



<bright field or phase difference>

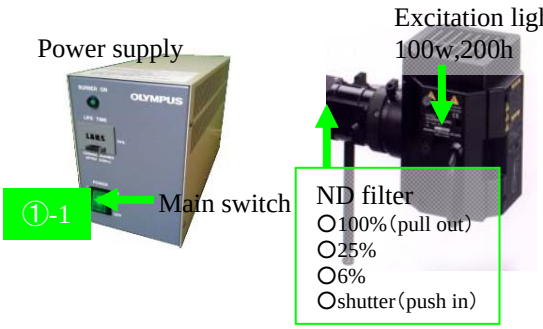
1. Turn on the transmitted light power switch.
2. Turn on the dimming switch. Adjust dial to 3200k(Camera mark).
   Adjust the brightness with ND filter.
3. Set the fluorescent shutter to the shutter position.
   (lower side of the stage)
4. Set the fluorescent filter to the ①NU position.
5. Select objective lens.
   (Choose a green letter lens when using phase difference.)
6. When using the phase difference,
   change the condenser to the specified position.
   In the case of bright field, use 4 or 5 position.
7. Put on the sample and adjust focus. (upside down)



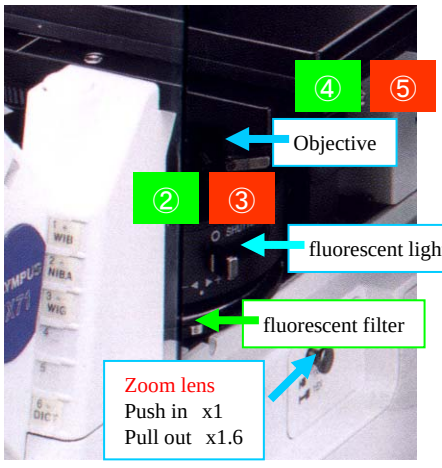
Num	Label	Lens
1	PHL	x4
2	PH1	x10,x20
3	PH2	x40,x60
4,5	–	bright field

<fluorescence>

1. Turn on the fluorescent power supply.
   When the transmitted light is on, turn off the dimming.
2. Move the fluorescent light shutter under the stage
   to emit excitation light.
3. Select the fluorescent filter.
   Adjust the brightness with the ND filter
   near the excitation light source.
4. Select the objective lens.
5. Put on the sample and adjust focus. (upside down)



When using fluorescence , adjust the brightness with ND filter.



objective	condenser	cap
x4 PH	PH L	-
x10 PH	PH 1	-
x20 PH	PH 1	P
x40 PH	PH 2	P
x20 FL	-	G
x60 FL	PH 2	P

Objective lens
Green letters…for phase difference
White letters…for fluorescence

Correction cap (For aberration correction)
G…For Glass Petri dish P…For Plastic Petri dish

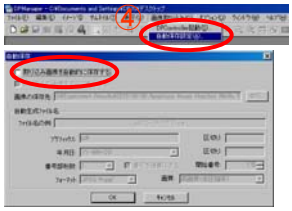
Adjust the correction ring for X40, x60 objective lens.

④
③

Number	Name	Dye	Excitation	Dichroic	Emission
1	NU	Hoechst	BP420-440	455	LP475
2	WIB	FITC LP	BP460-490	505	LP510
3	NIBA	FITC BP	BP470-490	505	BP510-550
4	WIG	Rhodamine	BP520-550	565	LP580
5	Cy5	Cy5	BP590-650		BP660-735
6	TXRED	Texas Red	BP545-580		LP610

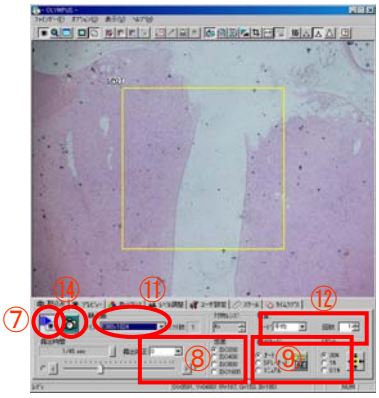
Olympus IX71

Method of camera shooting

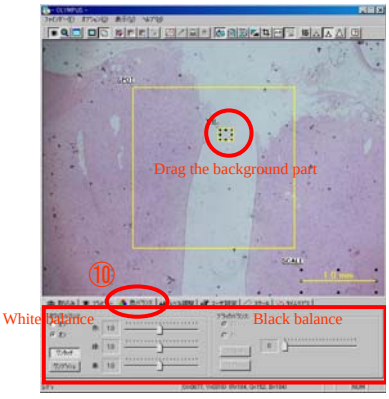


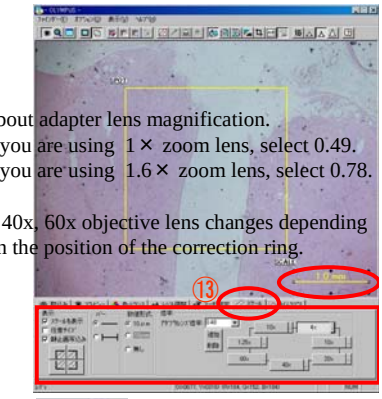
1. Turn on the PC.
2. Make the sample observable with a microscope.
   Move optical path switching to down.
3. Launch DPManager on the desktop.
4. Select “Capture image(画像取り込み) - Auto save setting(自動保存設定)” from the menu.
5. Uncheck “Save captured images automatically(取り込み画像を自動的に保存する)” and click OK.
6. Select “Capture image(画像取り込み) - Launch DPController(DPController起動)” from the menu.

7. Click the preview button to start the preview.
8. Select sensitivity(感度) and exposure compensation(露出補正).
   (Usually select ISO200 and 0.)
9. Select exposure mode. Auto exposure for bright field (オート) ,
   Auto exposure for fluorescence (SFLオート) , Manual exposure (マニュアル)
   In the case of auto exposure, select the photometric size and location.
   In the case of manual, adjust the exposure time.



10. If color balance is bad, execution white balance or black balance.
    Click the color balance tab (色バランス) and select ON (オン) .
    Click one touch (ワンタッチ) . Drag the white or black place on the image.
    Click the capture (取り込み) tab.
11. Select image size.(More than 1360 x 1024 pixel uses pixel shift.)
12. If there is a lot of noise, change the integration mode (積算モード) to average
    and enter the average number (回数) .
13. If scale is required, do the following:
    Click scale (スケール) tab.
    Check “Show Scale” (スケールを表示) and “Write to still Image” (静止画写込み) .
    Choose the shape of bar (バー) , number format (数値形式) .
    Select the lens magnification and adapter lens magnification you are using
    from the magnification (倍率) item.
    Change the position and length of the scale bar on the image
    Click the capture (取り込み) tab.
14. Click the shooting button to capture.
15. Image is transferred to DPManager. Save the image.



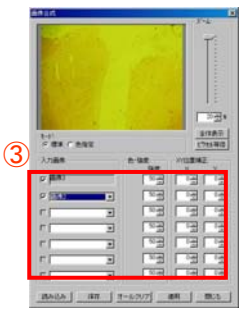


About adapter lens magnification.
If you are using 1× zoom lens, select 0.49.
If you are using 1.6× zoom lens, select 0.78.

※40x, 60x objective lens changes depending on the position of the correction ring.

<How to merge images>

1. Open all necessary images in DPManager.
2. Select “Image (イメージ) – Merge image (画像合成)” from menu.
3. Pull down the image name and select all the images you want to overlay.
   When color balance is bad, balance is taken by changing intensity (強度).
   Adjust with X and Y when there is color misregistration.
   Click Apply (適用) to create a newly merged image.



DPManager does not support scale insertion.
If insert scale, you need information on the number of pixels, objective magnification, and zoom magnification.
Calculate the pixel size and write the scale bar with any image processing software.
Pixel size = X total length / X pixel

for example… using objective=x20 , zoom=x1 , 1360x1024pixel
Pixel size = 886 / 1360 = 0.65 (um/pix)
If you want draw a scale bar of 20 um…
20 / 0.65 ≒ 31pix

X total length (um)
Surveyed on 5th Aug 2008

	Objective lens				
Zoom	x4	x10	x20	x40	x60
x1	4416	1776	886	442	297
x1.6	2742	1098	549	274	184