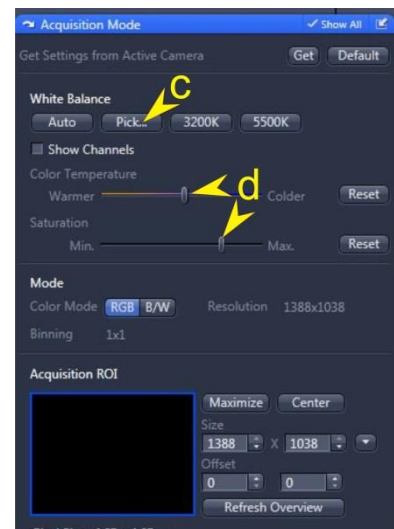# Tiling, Setting White Balance and Shade Correction using Colour Camera

White Balance (NB do this before starting tile setup)
- Select the objective that will be used for the final capture
- Click on "LIVE"
- Set exposure time (a) under "Channels" and lamp brightness (b) under "Light Path settings" to get the pixel values in the range without saturation.
- Under "Acquisition Mode" set white balance by using pick tool (c) and select a background region in the live image
- Adjust colour temperature and saturation if needed (d)
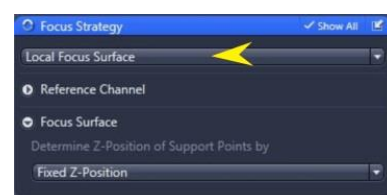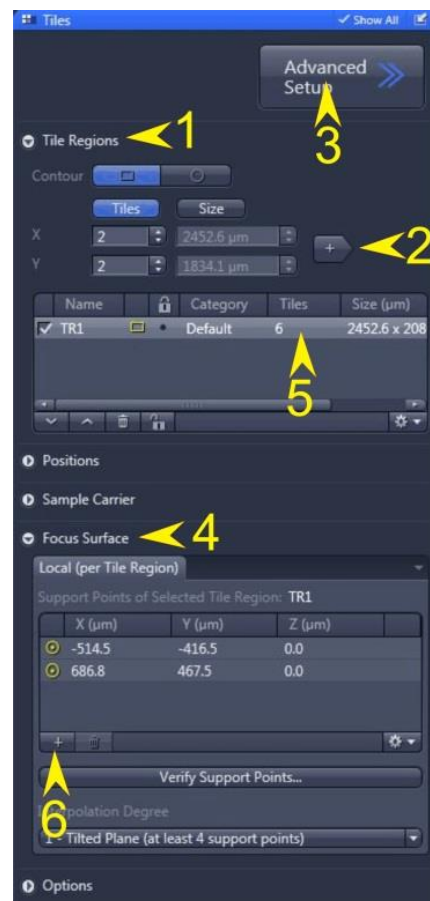
Setting up tile region

- Select the 5x objective and adjust exposure if necessary (remember previous exposure time for when you set it back to the capture magnification)
- Check the "Tiles" tick box on main control window
- Open "Tiles" tab
- Select "Tile Region" (1)
- Remove any existing tiles
- Add a 2x2 tile ("+" symbol) (2)
- Click "Advanced Setup" (3)
- Run Preview Scan (control – on lower right of image window)

Adjust tile region

- Change to the select tool on Dimensions window (below image)
- Click "Live"
- Double click on screen to move stage to areas of interest
- Click on orange/yellow box – changes to yellow box with side and corner adjusters
- Expand to cover region of interest (no. of tiles will increase automatically (red frames on screen)
- Re-run preview scan to get final preview image
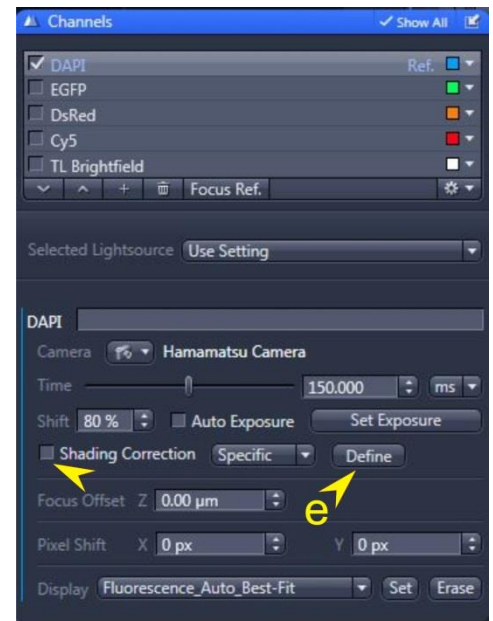
Set up Focus Map

- Select the objective that will be used for the final capture and re-set the exposure time if it was changed
- Move to centre of the preview and go "Live"
- Re-focus and set tile focus by right-clicking on the tile descriptor in the tile window – selecting the first option to set the Z focus
- Under "Focus Strategy" select "Local Surface Focus"
- Under "Tiles" select "Focus Surface" (4). NB - if tile not active click on tile region above (5))
- Change to the hand tool on Dimensions (so that you can move and zoom preview image)
- Go "Live" and on the preview image and double click on an area for focussing.
- Adjust focus then click "+" symbol under "Focus Surface" to add a focus position (6)
- double click on a new area and repeat until focus map complete

Shading correction
- Only needs to be done once for each objective used or unless the image background changes
- Click "Live" and move to a clear area of the slide but if possible near sample
- De-focus if necessary to hide dirt
- Under "Channels" select define (e) (if successful a tick will appear in the box). This will store the shade correction for the **current sample** and **objective**
  A warning will appear if lamp is too bright – reduce brightness and re-try

Capture tile region and stitch
- Run "Start Experiment"
- Save the image
- Under "Processing" and "Method" select "Stitching"
- Select image to be stitched under "input"
- In the parameters window select "new output" and tick the "fuse tiles" checkbox.
- Click "Apply"
- Save the new file